

THE
SOUTHERN AGRICULTURIST.

FEBRUARY, 1838.

PART I.

EDITORIAL AND ORIGINAL.

The Vine.

The necessity of diversifying our agricultural pursuits, and of the early development of our resources, cannot be too earnestly or too frequently urged upon our readers. We have so long rated ourselves upon the value and importance of our cotton and rice, in the foreign and domestic commerce of the Union, that we appear to believe we monopolize the growth of, and trade in, both those great staples, and to forget, that with the extension of the foreign production, the value of our own must be diminished. We lose sight of the fact, that the removal of our slaves, and other laborers, to Texas, will enhance the value of labor in the cotton and rice-growing States, and necessarily the cost of production. To meet this state of things, we cannot too soon direct our attention to the production of other articles, which will pay better, and bring into employment, the vast amount of free labor, which is now a mere tax. We allude to the thousands of white and colored males and females, who cannot undergo the hardships of the cotton or rice culture, but who are perfectly competent to the production of wine, silk, &c. If we do not soon bestir ourselves, we shall find our monopoly of cotton and rice all a dream, and, that in some other divisions of agricultural labor, we are at the distance post, while others are at the goal. The countries lately under the rule of Spain and Portugal, and now, almost in a state of anarchy, must ere long be tranquilized. Soon as

this shall be done, agriculture will be encouraged, and so soon as those countries shall occupy the positions in agriculture and commerce, which nature has fitted them for, our main dependence, rice and cotton, will decline in value, and perhaps ruinously to many. A certain soil and climate, being necessary to the production of the fine long, or sea-island cottons, we do not refer to them, but to what are known as short, or uplands. Cotton is indigenous of many vast tracts of country South of the United States; of some, where the spring is early, and the fall late; of others, where frosts never fall, and consequently the yield to the hand will be greater than from the best lands in *any* section of the Union. These peculiarities of location, will be likewise advantageous to rice, and it will be produced by whites, creoles, indians and negroes, in large and small quantities, upon their swamp and tide lands. Like wheat, in our Northern States and Europe, it will be sold rough, and in large or small parcels, to merchants, who will ship it to——perhaps *our own country*. We have ourselves, set the example of shipping “paddy,” and it will not escape imitation, for we have taught our customers, rice is better, when transported in its rough state. In our opinion the time is not distant, when shipping clean rice to Europe, will be a novelty. In Texas, Mexico, and South America, we shall have formidable competitors in the growth of the staples we now rely on so much, and we think it but a prudent fore-cast, to engage in the production of substitutes in commerce, so that if need be, we may relinquish the culture of cotton or rice, and suffer nothing from doing so. Without a very material fall in the price of lands and negroes, we cannot grow either rice or cotton, so as to compete *successfully* with the people of those Southern countries, when brought under well established governments. These views we are aware, some will insist are visionary; but we think little is ventured when we say, “the reflecting” will perceive, they must be realized.

These general remarks have been drawn from us by noticing the successful culture of the Grape in the State of Ohio. We allude to an article in the Cincinnati Republican, upon which the Editor of the Horticultural Register remarks, “it is from one of the most scientific and successful cultivators of the Vine in the West, and will be read with profit by all those who feel an interest in the

subject." As *we* of the South should be among those most interested, we republish the article entire, as the best mode of laying before our readers the views of a practical and fortunate grower of the Vine.

"The vintage this season has been later than usual, and the produce not abundant. Early in the season the vines promised as well as I have ever seen them, but our season has been unusually cool and wet, and one half our grapes dropped in the early part of it. My crop will fall a few barrels short of one hundred, but the quality promises to be good. From my own experience I should discard the old doctrine, of allowing the grapes to shrivel before gathering, and coincide with recent French writers, who are of opinion that more is lost in the aroma, than is gained in the saccharine principle. The more so, as the latter can always be supplied, and equally good with that obtained by the shrivelling of the fruit. Decidedly the finest grapes of the season, was a small vineyard of half an acre, the property of Mr. Jacob Resor.

"This vineyard is on the Ohio river, four miles below the city, on the side of the hill, fully exposed to the South. This is the first year of their bearing, and the fourth season since planting. His superior success this season is principally owing to their being young vines, and the ground dry. In dry, warm seasons, even a North exposure will yield better. Heretofore we have planted no vine nearer than five feet from plant to plant each way; his are planted three by four. His grapes are the Catawba, Isabella, and Cape, (Schuylkill Muscadell.) The product of his half acre was twenty-five barrels of wine, of thirty gallons per barrel, being fifteen hundred gallons to the acre. In a recent work on the manufacture of wine, by Bussby, he states that Mr. Ruinart, of Champagne, one of the largest proprietors of vines in that region, informed him, that the largest yield with them was eleven hundred gallons per acre; yet his vines were only eight or nine inches apart one way, and six or seven inches the other.

"The vine with us is less subject to injury than in any part of France or Germany, in which the best wines are made. They also complain of the wines becoming acid and ropy, neither of which evils have I met with in my wines. I have discontinued the cultivation of the Isabella

entirely. I have made a wine from the Catawba equal, and I believe superior to the best wines of the Rhine; but it ferments unequally, and I can never tell what the quality of my wine will be till spring. In one instance, last fall, I drew two barrels from the cask in which the grapes had been mashed at the same time, and placed them side by side in the wine cellar. The one was a brandy barrel, the other a wine barrel; the former appeared to be in a state of fermentation the whole winter, was dry, and not fine when racked last spring. The latter never fermented, was clear as amber, rich and sweet as the moment it was drawn from the cask. I bottled it, and it has now all the fixed air of champagne, but I have kept it in an ante-room attached to my ice house, or it would have burst the bottles. The same is true of the wines of Xeres in Spain, till the fermentation is over, it is not known whether the wine will prove to be Sherry or Amontillado.

"I am cultivating some new native varieties of grape, that are entirely free from the hard pulp generally prevalent in our native grapes, and for the table quite equal to the foreign grape; I have not yet tested the quality of all of them for wine. I have one variety, resembling the Noiren of Burgundy, that promises to make a superior wine, both red and white, but its produce will be comparatively small. The most celebrated of the Madeira wine merchants was recently in our city, when a bottle of these wines (red and white) was set before him, together with two bottles of Madeira, very old, of my own importing, red (Tinto) and white. No intimation was given that either was domestic, but a gentleman at the table requested him to select the best; he decided in favor of the domestic. The domestic wines were new, and I cannot say that I coincided with him in opinion, but I have known others, much better judges than myself, agree with him. The Cape always makes a fair wine, and should have brandy added in the spring—it is usual in all Madeira wines. It greatly improves by age, and resembles Madeira. At Vevay, this grape is always fermented in the skin, and a red wine made from it, which in my opinion is inferior to the white. The day is not far distant, when the banks of the Ohio will rival the rivers of France and Germany, in the quantity and quality of their wines. But after an experience of twenty-five years, and

a waste of time and money in the cultivation of a great variety of foreign grapes, they confine themselves to American varieties, and the producing of new varieties from their seed.

N. LONGWORTH.

Cincinnati, Oct. 20th, 1837."

We are not a little pleased with the success of Mr. Longworth, as it may induce others, and we trust some even in this State, to turn their attention to growing the vine. Vineyards afford profitable employment to young, and feeble people, who would most generally be a burthen to their parents or owners, were not some light employment provided for them. It appears, too, the native grape is preferred, after a waste of much money, and "twenty-five years experience." This again is encouraging, and we hope will not be forgotten. A very large vineyard can be attended properly by a very few hands, ordinary hands too, till the vintage, when a greater numerical force will be required, to gather and cull the fruit. We refer all who are inquisitive on this subject, to volume the 10th of this work. It is there stated, the sixth of an acre produced 528 gallons—"a most enormous crop," as Mr. Herbemont says, but undoubtedly made, as no one acquainted with that gentleman will question his statement.

Mr. H. readily obtains two dollars for every gallon of wine he makes, and his wines (red and white) are very good; but as he does not use brandy (but fermentation only) to give them body, we are unable to express an opinion as to how well, or long they will keep. We will take it upon ourselves to say, Mr. H. will cheerfully impart the lessons of experience, to any one desirous of profiting by them. We would seriously inquire of the most fortunate planters of rice or cotton—which of them ever did or can make, from the best land and upon the most approved system of culture, *fifteen hundred dollars from one acre?* Not one! Yet that sum (at only a dollar per gallon) is the produce of an acre of *vine* on the Ohio—and of less than the *fourth* of an acre in our own State. The *Congaree* beats the *Ohio*! What will not *careful* culture do? We do not know—and pause for the answer.

Agriculture, &c. in France.

The following extracts are from a letter received by Dr. JOSEPH JOHNSON of this city, from our late fellow-citizen, J. H. MEY, Esq., and furnished for publication in the Southern Agriculturist.

"PARIS, (France) 15th Sept. 1837.

"*My Dear Sir,*—The "*Academie de Sciences*" amuses me much in their sittings—a subject which may interest you I will state; Dr. Avago asserts, they have dug an artesian well 1050 feet here without finding water; a thick clay (coat of) prevented them from perforating deeper, but he hopes to overcome the difficulty, and to come to water hot enough to heat apartments, baths, &c.; that heat increases as we descend, and at a certain depth, every thing is in fusion.

"*Silk Worms.*—This is a subject of deep concern to our country. "Prince" and others have propagated and recommended the "*Morus Multicaulis*" as the best subject for that purpose—do all you can to destroy this opinion. Noisette, who has studied the "*Morus*" more than others, tells me there is none equal to the common White (*Morus Alba*) that the *Morus Multicaulis*, after four or five years, dies or vegetates badly. This is experience—profit by it.

"In Paris, the culture of the Mulberry is progressing rapidly. France consumes and exports 81 millions of silk. 36 to 40 thousand millions are imported from Italy, and they are pretty certain it will succeed here.

"M. Beauvais, who has studied the silkworm for ten years, asserts that he is certain of his method being the best, which is to keep them at a higher temperature than 18° (Riamur), multiply by 2½ and add 32, to make Fahrenheit's=72½°. His process is reduced to 3—1st, to the employment of a pure and fresh air constantly; 2d, to a constant dampness of 90° of Desaussure's Hygrometer; 3d, to slight repasts, as many as 48 the 1st, 36 the 2d, 24 the 3d, and 12 repasts the rest of their education, that is 18 days, making in all 324 repasts; in this way they consume less leaves than at 18 to 20° with 180.* At the last

"* This idea is no doubt good. Like children--often and little at a time is better for them than heavy meals. The same as in drinking--drink slowly and little at a time, and often, satisfies the thirst, as you know, better than swallowing tumblers-full at a draught!"

temperature, the worms have less vitality than those kept 4 or 5° higher, they have a different sensibility from the others. B. says he has drawn the source of his information from "Du Halde," and recommends translating all Chinese works on the silkworm.

"In England, I observe they have invented a machine to work by steam for making silk, whereby a girl can do as much work as two men formerly, and the space occupied by the machine not as great as before.

"A Medicinal Spring has been discovered near Vicenza, the use of which alone dissolves the stone in the bladder. A man of 70 years old has been cured by drinking it, the stone passing off in small particles. As you keep Leeches (I believe) for your information, it is found out that 2 or 3 ounces of "animal charcoal," powdered, in water, kept a dozen leeches a year. The powder must be washed two or three times in boiling water previously to being added to the water, in order to disengage it of the sulphuric acid the coal contains. By disgorging them in a little marine salt, and put again into water, in two or three days they are equal to those never used before.

"M. Vilmoren has made trial of a species of wheat from New Trinity, which is said to ripen in 70 days, and to give several crops. V—thinks unfavorably of it. I will obtain some seed for our friend Benjamin, if he is in the land of the living.

"The *Beet Root* occupies France very much. I shall myself engage in its culture. A hectare (2,632 toises square of 6 feet) yields from 2100 to 6000 lbs. more than the same lands in the West Indies, and as much as the lands in the East Indies. The cost at present is 50 francs to work it, and it may be made for 30 francs the 100 lbs. In retail, at present, we pay 20 cts. a pound for the best. The government wishes to encourage the West India Sugars by laying a duty on their industry at home (taxing it 2 cents the pound.) I hope this will not succeed, for since the introduction of the cultivation of *Beet Root*, lands have risen 40, 60, 80 and 100 francs the hectare*—200,000 men employed in its culture, &c., 18,000 hectares planted, and a capital of 100 millions of francs engaged in it!! This speaks volumes. I recollect in 1815, when Napoleon introduced its culture, a caricature was shewn

About 2 3-6ths acres, our measure.

of the young King of Rome, with a Beet Root in his mouth, crying out, "*Papa dit que c'est du sucre!*" (Papa says 'tis sugar!)

"It is worthy of remark, that provisions and property generally on the continent have risen 50 per cent.!! My friend Steinmetz at Mannheim, says, money cannot command more than 3 per cent., and with difficulty 4 per ct. on mortgages.

"I recollect seeing at the Bank a sample of "*Phor-meum Tenax*," manufactured. Michaux persists in saying we ought to encourage the planting of this plant. At "Pont S'Remy" a manufactory is established. Its virtues are, the quality is better than flax, and it may be immersed in water 5 to 7 months without injury, for cables, nets, &c.; of course it is valuable. The "*Laurus Camphora*" will no doubt succeed with us.

"M. Bonnet, of "Boulogne Sumer," produced two crops of potatoes in the year—the middle of July he dug up the roots, and planted them six inches deep, trimming the tops to 8 inches. In the day they were covered, and watered in the evening. In three days they became strong and looked fresh—by hilling them afterwards, he had by the middle of October a second crop of 10 to 15 potatoes to each plant, better in quality than the first crop.

"The crop of Wines generally this year, will not be better than 1835, according to present appearances. The weather has set in rainy, and already speculations are made, fearing injury may be sustained by the present crop. The "Raisin," which gives the Champagne Brandy, looks well, and indicates an excellent one, and the quality also excellent.

"The Nut Grass is a *pest* with you. May it not contain a tanning principle? It is astringent—draw the attention of some able chemist to the subject.

"With respect, I am truly yours."

Vending Ardent Spirits, destructive of the Planting Interest.

Mr. Editor,—Presuming your valuable register as much devoted to any *particular* interest of the planter, as to the advancement of agriculture as a science, and thinking the period preceding the announcement of candidates for seats in the Legislature, of all others the most proper for suggesting subjects, which any class of citizens may think require legislative action, and particularly propitious to obtaining correspondent pledges from the candidates, I hope you will not deem the following remarks, unworthy a place in your forthcoming number. The seats in the lower House are now all vacant, or rather may be so considered, unless some unlooked for event should make it necessary for the Governor to call an extra-ordinary session of the Legislature. The old members may become *new* candidates, and we have the undoubted right to require of them pledges, previous to the election, to support any measure which we desire adopted. The time has come, when it appears to me pledges must be resorted to, or the slave owners must quietly endure the evil, which is the subject of this communication.

That the easy procurement of ardent spirits by our slaves is an evil of great magnitude, all will freely admit. Experience teaches, a remedy to be effective, must be stronger than the disease—to clear a field, the axe must be laid to the foot of the tree, and the roots must be grubbed up. Many attempts have been made to check the sale, and lessen the consumption of ardent spirits—the poison which charms whilst it kills—but no legislative enactments have yet effected any important change for the better in this State—they have tended rather to injure fair dealers, and to that extent have enlarged the advantages already enjoyed, by those who are less scrupulous of violating the laws, or in the use of means to achieve fortune. Oaths and other restrictions on the sale of ardent spirits now of force, are in general vexatious and unavailing, and will continue so, while the privilege of vending them can be acquired by any one, on paying from \$17 to \$61, as he may chance to live under the control of the Commissioners of Roads in the country, the Intendant and Wardens of small Towns, or the Mayor and Aldermen of the city of Charleston. I may be mistaken, but I

believe the fact to be as already stated, that the privilege of corrupting plantations, and brutalizing whole communities, through this medium, can be indirectly purchased of the Legislature on the easy terms above mentioned; and what is yet worse, it can be enjoyed by all *gratis*, upon the sole condition they do not draw less than three gallons. A privilege many profit by—a flaw in the statutes available for profit to many, who only *pretend* conformity to their requisitions. It has been often asserted, and I am sure can be proved, there are in this city those who do not call themselves retailers, yet will sell a hogsh-head or pipe of spirits, and permit it to be drawn off in their stores, and distributed by the demijon among the acquaintances of the purchaser. There are others, it is said, who go farther—those who take on themselves the trouble of drawing, and very obligingly supply to any one the quantum of a demijon, provided it contain not less than three gallons. To all intents and purposes, these persons are retailers, and these practices are mere evasions of the law. What constitutes retailing, if parcelling out a cask or case does not? This practice is justly complained of by those who purchase licenses—and I think it will be freely conceded, those only who pay the tax on retailing, should enjoy the profits derivable from it—it is a purchased privilege. I presume the proviso which took from without the operation of the law, those who did not sell less than three gallons, was intended to permit the occasional division of a pipe, or other large vessel, among friends, without either of them incurring the penalty for retailing without a license, and not to sanction the practice in any individual as his business, either wholly or in part. If the importer parcels out a package on his own account—is he not a retailer? If he suffers it done in his stores by the purchaser from him—are not they both retailers? In my opinion, drawing a quantity barely sufficient to vindicate them from the legal charge of retailing, is a violation of the spirit of the law, and ought no more to be tolerated, than selling smaller quantities in meaner places without license. It does not appear possible to prevent the use or sale of ardent spirits, but it is quite possible to subject the latter to wholesome government, and to check, if not wholly remove, some of the evils consequent upon it. The strong arm of the law must be

brought to act upon it—by no side cuts, but by the cut direct—BY RAISING THE PRICE OF LICENSES.

Walking the streets of any city, town, or village; or traveling the roads in this State, an observant man, will immediately perceive how very little capital is necessary to the establishment of a shop, where spirits are to be had by the gallon or the glass. In many of them, a call for a gallon of good spirits, would astonish their pigmy stand casks—Lilliputians set up in mimicry of man, at best—but often hungry Lilliputians. A minute's calculation will show, that two hundred dollars will pay for the license, and stock a grog shop in any part of this State; and one hundred any where, without the limits of corporations. It is said every man must live, and every business be supported, and no one will dispute the general correctness of the proposition. But while every man has a right to live upon the *wants* of his fellow, it will not be assumed he is privileged to live upon his *vices*, or profit by the villanies of his servants, and so accumulate a fortune at the *cost* of his less crafty neighbor—nor will it be denied, a business may be so conducted as to become a public nuisance, and a source of much individual misery. The evils resulting from the great number of beer houses, grog shops and country stores, are so obvious, as to strike the most careless observer. If we inquire how so many of these establishments are supported, it will be found while some (and these the best of them) barely sustain themselves, or fail, others make large and rapid strides to fortune, by means unknown in any other business, and by illicit trade with our negroes. Places enough can be found, affording to the negro (or other thief) a market for any thing he may offer for sale, whether it be a saddle tack, or a gold lever watch; and most frequently he is incited to robbery by the certainty of obtaining grog in exchange for his plunder. If a planter can be found, who does not consider a grog shop in his vicinity injurious to *his* interests—the morals and health of his *people*—his name should be given to the public—he should be known, as one blessed, or obtuse above the many. It is a fact too well known to be questioned, that a very large portion of the retailers of spirits, (whether in towns or the open country) are not over particular as to what they sell, or to whom—what they buy, or of whom; their sole object being to make money. There are very many shops

where spirits are sold among other things, which could not sustain themselves one month upon their legitimate gains, yet we see they not only do sustain themselves, but that in a few years their proprietors are classed among the wealthy. The fair profits are large enough, but in the history of some fortunes accumulated (or originated) in that business, they form a very inconsiderable item. In remarking upon the sale of ardent spirits, I do not mean to be understood no other article is sold in the shops referred to, but that ardent spirits are, to many establishments, the "*spinal marrow*," without which they would languish and die. Absolute prevention of the sale of spirits cannot be effected, and it were folly to attempt it, for distillation of them will be continued in places over which we have no control; and so long as the article is produced, it will find unfortunately, both purchaser and consumer. But if the use (or rather abuse) of spirits cannot be subjected to legal restraints, the same difficulty does not oppose itself to regulating the sale of them. By severe, yet judicious enactments, it is within the power of the Legislature to abate very materially, the evil so much complained of by planters, and others. It is only for that body to set about the work with a hearty, determined will to do it, and 'tis done—the great mass of the people will sustain them. Among other enactments, I would recommend that every person vending a part of a package of spirits, whether large or small, should be deemed a *retailer*, and declared subject to all the taxes, penalties and restrictions imposed on that class of our citizens. From this I would except divisions in *private residences*, for the convenience of families and their friends, but no other. An efficient remedy will be found in raising the licenses so high, that few will engage in the business, and that those few shall have a considerable capital, previous to embarking in it. Of all kinds of business, vending spirituous liquors is the least entitled to legislative favor—the very one which, if practicable, should be prevented accumulating a capital upon which to support itself. This can in part be done by a high tax on retailing—by making it necessary to possess a considerable sum to purchase the license, and stock the store. At present the sum required is so small, our towns and roads are studded with shops, trading in spirits—amassing money out of almost literally nothing—or as I said before, "accumulating capi-

tal upon which to support themselves." There are now and always will be, those who will evade the payment of any license tax, if they can. To meet these *estimable* citizens, the law should declare the presence of any open or ullage case or cask, &c. of spirituous liquors in any store, or shop, presumptive evidence that the same is retailed on the premises, and that the occupant shall incur all the penalties established by law for retailing without a licence; *provided always*, that the person so charged shall have the right to prove the contrary. These three suggestions properly carried out by the Legislature, and acted upon by the executive officers of the law, will effect incalculable good—they will lay the axe to the root of the evil. Licenses for stores or shops, hotels and houses of private entertainment, (if they supply customers with ardent spirits) billiard rooms, restaurateurs, &c., in the cities of Charleston and Columbia, should be regulated by the municipal authorities of the said places, under the most peremptory injunctions that no store or shop license shall be under one thousand dollars, and no license whatever under one hundred dollars; and this last, to be for a house of private entertainment, supplying customers with spirits. I would tax these houses, because, if they pay nothing, they will injure the public hotels, and all other houses or places having bars, all of which should be compelled to pay a much higher price for a license, exclusive of the tax paid for the privilege of billiards, &c. &c. In all other towns and villages, the limitations should be half at least the sums fixed for Charleston and Columbia, and in every instance, any house, or kind of business (requiring license) done, within ten miles of any of the cities, towns or villages, should pay the same sums to the Commissioners of Roads, as would be required had the house been situated, or the business been carried on, in the city, town or village nearest, and within ten miles of the applicant for the license. Such towns, &c. being incorporated, should have the regulation of licenses, under the same restrictions as Charleston and Columbia. All stores or shops beyond ten miles of a city, town or village, should pay for a license at least two hundred and fifty dollars, and that these should not be injured, all houses of entertainment on the road, coming under the same regulations as to distance, ought to be charged at least fifty dollars, if they furnish spirits to customers. Some of these sug-

gestions seem severe, and others being new, may appear oppressive—for instance, the taxes on houses of entertainment in the towns, &c. and in the country. Let it be remembered it is not compulsory—these houses are free to pay it, or not. If by accommodating their customers they profit, either by accession of business, or by increased price for board—why should they not pay the tax? Why exempt them, because a bar is not set up in form? But the object is not revenue. We wish to tax heavily the retailers of ardent spirits, to reduce the number of persons engaged in that business, and to do justice to the few who incur the high tax. To do this, all persons vending the same articles, though in smaller quantities, must pay a corresponding tax, or the business of the small dealers will be increased to the prejudice of those who pay the largest tax. Bars, wherever they are kept, pay their proprietors immense profits, and as there is no one thing so useless, yet so mischievous as a bar, there is no more legitimate object of taxation, and the license for one should be of the highest price. The hope entertained, however, is not so much that a less quantity of ardent spirits will be sold or drank, as that bringing the sale under wholesome restraint and into fewer hands, the illicit trade with our slaves will receive its death blow, or at least be diminished in a very important degree. Adopt my suggestions, embody them into law, and what will be the effect? A few only, will or can pay \$1000 for a license; but those few, will find the whole retail trade concentrated in their hands, and of course the profits, which will make it their interest to pay the high, in preference to the present tax. The Marshals will have fewer of these establishments to watch—in fact, these few retailers paying so highly for their privilege, will value it accordingly, and do more than all the Marshals united, towards detecting and bringing to justice, those who retail without license. The business being confined to a few, the probability is, they will be men of good character, and in that case, the vent for stolen goods will be completely closed. But suppose them all of bad character—one great object would be gained, we should have fewer to watch, our negroes fewer markets for the sale of stolen property, and fewer opportunities of exchanging their food for drink. The advantages of limiting the sale of spirits to a few, are so many, and so obvious, that it is unnecessary to enlarge

upon the subject. What I have said of Charleston, applies with equal truth to all parts of the State. Scarcely a session passes without some legislation on this subject, but from a very strange over-sight, as it appears to me, they have not thought of raising the licences, a measure, without which, all others will be inefficient. Are they afraid of offending the people? If so they are in error. Without doubt they would offend many, but there can be as little doubt the majority will approve the course. Believing my views correct, I think it time the people should instruct their representatives, and there is no better mode of doing so than through the ballot box. With this view, I would earnestly recommend to every Agricultural Society, and to the planters and slave owners generally, in those districts where no such Societies are organized, to appoint committees to correspond with the candidates for the next Legislature, as soon as they are announced, and ascertain whether or not, they will advocate a law fixing a *high price* on licences for retailing spirituous liquors, and should any decline the pledge, *to refuse one and all*, any support to such candidate or candidates, and to set up others. If this is done, the day will be our own. It is said, and I doubt not it is true, that no less than three hundred licenses have been issued under the authority of the City Council, and the Commissioners of Cross Roads for Charleston Neck. Much the greater part of these, say nine-tenths, are for shops called No. 3. We may infer what we please—but no reflecting man can believe, so many live by fair trade. The work of reform cannot be too soon commenced, and as the planters have the power to effect any change in this matter which they desire, it is hoped, having a just regard to their own advantage and the general good, they will not fail to exercise it. I go for HIGH LICENSES, or none; for there is neither sense or justice in vexing the good, to benefit the worthless citizen.

Q.

Advantages of Reading the Southern Agriculturist.

Lawtonville, (S. C.) Jan. 8th, 1838.

Mr. Editor,—I herein enclose you \$5 for the *Agriculturist* for 1838, for I am much more inclined to “book-farming” than when I first commenced reading your valuable periodical, and I think there are many others who could profitably invest a few dollars and a little time in this way; and were I as competent as many of your readers, I would not remain silent in a matter on which evidently depends the prosperity of a free and independent people. There are perhaps a few who have good land sufficient for them, but I presume, by far the greater number finding themselves so far behind the favored few, and the planters of the West, are turning in their minds what ought they to do, what can they do—“hard times” are pressing upon them, and they feel that some effort on their part is necessary. Some will no doubt plant more and push harder; others will endeavor to live more economically; and others again will become dissatisfied, sell their possessions, and go to the West. Now we all know it to be injudicious always to plant largely and drive hard, for we must soon wear out most of our land, or break down our hands, or perhaps do both. 'Tis true very many of us may economise in our mode of living, but this may not apply to all, and if it did, it may not to any considerable extent. And as to the last proposed remedy, I am not fully able to express my feelings. Notwithstanding how others may bear the idea, it fills me with deep emotions; for who is it, sir, what patriot, what man of feeling, can forsake his native soil, his friends and kindred, to search out a home for *life* in the West, among strangers, or perhaps among savages and wild beasts, without casting a “longing, lingering look behind;” or without recurring in thought to his many happy spent hours amidst his acquaintances, among whom he was reared, and to many of whom he has become greatly attached. Now you perceive, *Mr. Editor*, that the last proposed remedy is an exceedingly disagreeable one to the mind. I contend for what I call a much more pleasant one, which is manuring, or in other words, “book-farming.” Some may say, I have not the materials for manure. I will only say to such, read your periodical and try experiments. I am a

pine land planter, and all I want is the knowledge, I have the materials.

PINE WOODS.

Experiment on Slips.

Colleton District, Jan. 16th, 1838.

Mr. Editor,—You will find below an experiment on Slips. In 1836, I had the field that I intended to plant slips in, where I could not cow pen my land without taking more rails and time than I could conveniently spare from the plantation work, and I was satisfied, that unless I manured my slips, I could not expect but a poor yield of potatoes. I concluded I would manure them in this way: I banked my land, and then I opened the bed where the slip was to be covered with dirt, and put about a pint of manure, out of the cow-pen; I then put the slips down, and covered them up; and sir, to my astonishment, when I dug them in the fall, they far exceeded my expectations. I am satisfied, that to manure slips in this way, will answer at any season, if you use manure that has no heat in it. It is the most economical way that I ever tried to manure slips, and not only that, you can get more manured in a day with one hand.

If this piece will be of any service to you, or any planter, I shall feel myself gratified.

I shall always be willing to impart any information on the subject of agriculture, that I am in possession of, as I am a friend to agriculture; and I think if every planter was to communicate to you what little experience he has, that you would have pieces enough to publish monthly.

I am yours, respectfully,

COLLETON.

*Observations on the Morus Multicaulis, and other things,
contained in Mr. Mey's Letter.*

It will be observed, on reference to a preceding page, our late fellow-citizen, Mr. Mey, says in relation to the *Silkworm*, that it is "a subject of *deep concern* to our country." So it is; and we are gratified at discovering in the kindly caution, with which he concludes his remarks on the *Morus Multicaulis* Mulberry, "his heart untraveled, still turns to us;" to our country. But the culture of the mulberry, is confessedly a subject upon which Mr. Mey is not informed, and his objection to the *Morus Multicaulis*, is based upon the opinion of a gentleman, who (being more a florist than aught else) never, if we mistake not, cultivated it, with a view to testing its value, as food for the silkworm. Had he done so, the probability is, he would have expressed an opposite opinion. Experience has proved, that in this country, (every thing considered) it is the best; as regards facility of propagation; abundance of foliage; its value, as food for the worm; the expense of gathering the leaves; and its adaptation to hedging. In common with other varieties, it can be propagated from cuttings; but the *Morus Multicaulis* differs from all others, it is said, in the great number of stems thrown up, the rapidity of its growth, and the concavity, or (if we be excused the term) saucer surface, of the leaf. This peculiarity in the leaf, together with the numerous rival shoots from the root, prove the *genuine Morus Multicaulis*. It is affirmed, by those who ought to know, that *all others* are of a different species, or genus. From all we have been able to learn on this subject, the *Multicaulis* best deserves our attention. We have nothing to fear from frosts, and we cannot conceive any good reason, why the tree should necessarily either die, or vegetate badly with us, in so very brief a space as four or five years. It is not a flow'ring tree, and any location may be preferable to a florist's garden; where it would almost certainly "vegetate badly," from want of attention. In all parts of the Union, it is the favorite mulberry, and not a few ingenious tricks have been played off, in the sale of the seed. Growers, in whom every confidence may be placed, veto planting the seed, and recommend the setting of cuttings, as the most certain means of obtaining

the *genuine* *Morus Multicaulis*, and as a gain of time, in the growth of the plant. We do not know any thing, which would afford us more real gratification, than to see a proper spirit awakened in our section of the Union, on this subject. We even think our sunny girls would look *brighter still*, if robed in silks, of our own growth and manufacture. Let us produce the silk, and if, as is the case with our cotton, we do not choose to reel or weave it; our friends at home, or abroad, will do both for us—but *not gratis*. Thousands of idle hands, can be profitably employed in cultivating the mulberry, feeding the worms, and thus producing cocoons—silk in its raw state. We need not say, cocoons will always find a ready market. We long to see the day, when our neighbors of the daily press, will quote as familiarly the price of cocoons, as they now do, that of cotton or rice.

But it is not only as food for the silkworm, the *Morus Multicaulis* is valuable to us. From cuttings, it will attain a growth of six or seven feet in one season, (with us, perhaps more) and may be trimmed, and so disposed, as to fence a garden or plantation, against the inroads of cattle. Most trees form into a single trunk or body, and throw out their limbs a considerable distance above the earth; but the *Multicaulis* branches from the root, and forms several small trees, never attaining the height, or body, of the other varieties of the mulberry. This fits it for hedges; while the limbs being more easily reached, and more pliant than those of the heavier, and more lofty mulberry, the leaves are gathered for the worms at much less cost, and on this account, among others, the silk-grower prefers it to any other. The rapid growth of this tree, recommends it to planters as suitable for defences to their grounds, and with little trouble, they can be made highly ornamental to the plantation, as well as useful. Once properly set, they will last for years, and the labor expended in splitting rails, hauling and building, or repairing fences every year, may be devoted to the soil, or opening new land. Live fences, are becoming every day more important to places accessible to boats, because, as the surplus wood is cut from the neighborhood of our towns, the demands upon the interior will be greater, and this call for wood, must be supplied by the tracts of country, within convenient hauling distance from the banks of the rivers. This will embrace all the river plan-

tations, and with an increasing demand for wood to supply families, steam-mills, and steam-boats, it is not difficult to foresee a day, when the planters on the rivers will find wood scarce, and rail fences very expensive. With the distance from which wood has to be brought, and the difficulty of getting it to market, the price will be enhanced, and with the demand upon the country, the price must advance there. But whether so or not, if live hedges will answer all the purposes of Virginia ziz zags, and enable the planter to collect more material for manure, or work his land better, why not cultivate them? But, considering the advance of wood, suggested to our mind another matter, which as it cost us nothing, we will freely give. It is, that the Mulberry, the Pride of India, and other trees of quick growth, might be profitably planted as fire wood, on the lands now stripped of their native forest. We do not think any of them equal to oak, but they certainly are to ash, or any other of the lighter kinds of wood, now selling readily in this city, at six dollars a cord. This appropriation of the mulberry, is unique, no doubt, but if we can in any way make waste lands profitable, or check the advance in the price of fuel, we shall congratulate ourselves upon "not having lived in vain."

Mr. Mey's notice of the *Beet Root*, is interesting and instructive. A direct tax of two cents a pound, on domestic sugar, is enormous, but without it, the sugar producing colonies of France, must be materially injured, or ruined. With that, however, we have nothing to do. But we may pause and wonder, at the magnitude and importance this business has attained within a few years. It is but one, of many hundreds, which employ the people of France, yet we find invested in it, nearly twenty millions of dollars, and two hundred thousand men deriving their support from it. This is essentially a new interest, and it must be profitable. Since the general peace of 1815, it has been obliged to compete with every sugar-growing part of the world, and has done so with advantage. It has excited much attention in various parts of our own country—agents have been sent to France to acquire information on the subject, and ere long we may expect to see Northern sugar in our market. We have published much on the subject, but we cannot learn that any attention to it, has been awakened in any of the Southern States. In time to come, we shall regret this

supineness, and proably begin a competition with our Northern brethren, under every disadvantage. This is just as they would have us do. We hope most earnestly the "Agricultural Society of South-Carolina," will make an early, and effective move in these matters.

We do not know, whether or not, our Northern friends are troubled with that "pest," the *Nut Grass*. If not, we are charitable enough to wish, they may remain unacquainted with it. If they are however, we should like to be informed on the subject of its fitness for tanning, or any other purpose. We of the South, have ever considered it a mere annoyance, but if it has valuable properties, we are willing to revoke in part, or in toto, the sentence of unmitigated reprobation, always heretofore passed upon it. The Nut is certainly very astringent, and may be applicable to the purpose suggested by Mr. Mey; but the subject is so entirely new to us, we shall not venture even a guess. Should it prove so, we can produce it in any quantity, for it grows without coaxing, and St. Nicholas can hardly destroy it. The fact shall be ascertained, if our memory does not prove faulty.

On Raising Negroes.

St. James', Santee, Jan. 20th, 1838.

Mr. Editor,—Some make a business of raising horses, beeves, hogs and sheep, but few devote particular attention to raising negroes. Planters are humane to their people, but they seldom consider the raising little negroes, an employment, distinct from tilling the ground. They generally content themselves with supplying the wants of their negroes, and expect in return, the usual tasks faithfully performed. Success in negro raising, is not only a matter of great concern to their owners, but to be insured, it must be conducted as a business separate from, and unconnected with the market crop. The sacrifice of a little labor, will curtail the number of children still-born, and preserve the lives of many born in health, but which die for want of a proper, continuous care for a few weeks. Even as it is, I believe the number of still-born, and deaths, among our negroes, is much smaller

than does occur annually in the same number of the peasantry, of any other country in the world ; because humanity and interest combine to make the slave owner provide for the children, born of his negroes. But if the planter will make it a part of his employment or business to *raise negroes*, he will be able to give more attention to pregnant women ; to mothers and their pickaninnies, (as they call their little ones) and thereby save many, to the profit of his family. While our stock is increased only in the natural way, a great many of our most sturdy negroes are bought up and sent West, thereby depriving us of their increase. If this can be remedied in any way, we should do it—one large stride towards it, (if not a complete remedy) is to give more of our time and care, to those which remain. Some of our people have grown rich in this way.

I know two gentlemen, who commenced life together as merchants, upon nothing but their character, and a letter of credit for a small amount. They did well, but one would draw his profits and farm it, and they dissolved the co-partnership. By industry and frugality, the farmer succeeded as well as he had done in merchandize ; but not satisfied, he determined to raise negroes. In that too he prospered—and the once poor boy, can now shake change with most of those reputed richest in our State. He works a large force, and mostly of his own raising and training. If 'twere not indelicate, I would favor you with his name. I will tell you his plan in part, at any rate, and those of your readers who please, may practice upon it.

He settled a spot, as healthy as possible, within a convenient distance from his principal plantation, and to this he sent his pregnant females, a month or so before confinement. Tight and convenient houses were provided for their use, and as long as they could labor, a wholesome task, by way of exercise, was required of them on the small fields attached to the nursery. And the nurses were not old women, fit only to set hens and feed chickens, but (though inefficient field laborers) such as were able enough to handle women, and sufficiently intelligent, to take care of both mother and child. According to the health of these last, their stay at the nursery was long or short. Sick negroes were sent to the same place, had the benefit of the same

attention, and when convalescent, labored moderately on that farm, till they were in condition to return to their customary abode, and employment. Hominy eaters, as we call them, were kept there. If not engaged in attendance on the sick, the nurses were employed in various ways; they could weed and pick cotton, if they could not carry it, and take on themselves the duties of the old people, or the more convalescent, when wet or cold weather made it proper for them to remain within doors. In fact, such an establishment amply repays the owner, besides affording him the heartfelt gratification, of knowing all his people, the hale, the sick, the old, and the young, are all provided for as well as his own family.

On a Nursery Farm so conducted, the sick, old, and feeble are more happily situated than the free poor, of any clime or country under the canopy of heaven. Every planter has it in his power to establish one; if not upon a large scale, upon a small one. The loss in labor is a mere trifle—all work, that can work; the only difference is, that the labor is done in a different place, and the amount is for a short time, apportioned to the convenience, rather than the ability, of the laborer. All who are acquainted with negroes, know they are an improvident race, and they must be made to do what is for their own good. In the general negro settlement on a plantation, that care cannot be given, on account of the patients being scattered among many houses, which becomes quite easy and practicable, when they are assembled in a nursery. The master and the overseer may order, but where there are no nurses responsible for the execution of their orders, they will not be obeyed—physicians will be employed to no purpose—the medicines go into the fire-place, or out of the window; till the disease baffles all skill, and the patient dies. So die, many every year.

I forgot to say, my mercantile-farming-negro-raising friend, made it a rule to present his breeding women five dollars in money for every safe birth, and the same to the midwife in attendance, who was also his own property. Misconduct in either, was to be punished by withholding the customary present, and personal chastisement. I say *was to be*—because he never made unmeaning promises or threats; and not losing a birth by carelessness, there was no subject, on which to execute his threat'nings. This is the way—*a-la-mode de Crockett*.

On a plantation, the sick and young will, in spite of owner, or overseer, eat improper food—fruit, fish, flesh and fowl. They will do wrong, unless restrained by being placed under the charge of a special nurse, and will back each other in any scrape; sometimes at the cost of life. A mother or father has given a child improper food—the child sickens—nothing is said 'till it is ill, very ill—the indigestible food is still in the stomach, but he or she will pretend, and even swear ignorance. Fish and flesh cannot be kept from a plantation, because they are indispensable—but fruit can be; and if a planter suffers from the use of improper fruit, he deserves no sympathy.

Much sickness is produced among whites, as well as colored people, by the improper use of aliment; good, and very good, in itself. The new potato, for instance, is not *strong*, wholesome food, by itself; neither is new corn. The former is flatulent and heavy; the latter, laxative; and both should be fed out with a proper portion of old grain. In the upper country, the working class, (white and black) make their corn into bread chiefly; whereas, with us, it is made into hominy. Bread is decidedly preferable, as little, if any of the alimentary principle of the grain, is lost in kneading and baking; and if the cakes be made tolerably thin, all the better, as the crust is more easily digested than the crumb, and therefore more wholesome for children. Hominy, we all know, undergoes the double process of washing and boiling, and as a necessary consequence, loses much of the aliment which remains in bread, without being at all more digestible. Bread and soup, frequently, will be a grateful and unquestionably wholesome variety, in the regimen of a plantation.

I am fully persuaded, that by a judicious division of our skill, time, and care, between the soil, and the negroes, the produce of the first will be little, if at all less; and that of the latter much greater, than heretofore. Let us compel our negroes to take care of themselves, and their young; they will be the happier, and we the richer for it.

Your ob't. servant,

A. S. D.

PART II.

SELECTIONS.

Facts relating to the Silk Culture.

[FROM THE SILK CULTURIST.]

BLUE ROCK, OHIO, Aug, 17, 1837.

F. G. COMSTOCK, Esq.

Dear Sir,—If I forget not, I promised you an account of my experiments in the silk business, this season, and a specimen of my silk. I am now prepared to fulfil this promise, but from the new regulations of the Post-Master General, I prefer sending the specimen by the first private opportunity.

I have succeeded even better than I expected. My fifteen hundred worms proved to be eight or ten thousand, all of which, except a few that the mice destroyed, spun good cocoons, although they were purposely exposed to the changes of an uncommonly variable season; the range of the thermometer, in the room in which they were kept, being from 52 to 87 degrees, Farenheit's scale. The windows were closed during their whole existence, and necessity compelled me once or twice in their last stage, to feed them on leaves entirely dry, and yet not one dozen died of disease. The cocoons were of good size and weight, three hundred good ones making a pound; and some of them which I have reeled, yielded near forty per cent. of silk, of a fine, soft, and lustrous quality, equalling, when placed in the sun's rays, the brilliancy of polished gold. This result has convinced me of the entire practicability of the silk enterprise, and has also dissipated much of the scepticism of my neighbors, though some still persist, (in spite of experimental demonstration to the contrary) in placing it on a par with the tobacco mania, which raged some few years since in this neighborhood, and which caused considerable loss among some who entered into it without a competent knowledge of its nature.

The result of this experiment leads me to the following conclusions:

1st. That no artificial heat is necessary in our climate, and
2dly. That the worm will feed as well, enjoy as good health, and produce as much, and as fine silk, from the native leaf as from the Chinese or Italian, your correspondent Mr. A. David to the contrary notwithstanding.

With respect to the first of these propositions, I will observe: Our summers cannot be too cool, nor can our cocoonerics be too much shaded, nor too well ventilated, for the health of the worms and the

comfort of the feeder. This remark is certainly true, that more danger is to be apprehended from cold than from heat, and therefore I conclude that the advice which has often been urged, is good, that laboratories should be built in the most shaded and airy situations. Keep the worms cool enough, give them room enough, air enough, and food enough, and nothing is to be feared.

With respect to the second position, the result of my experiments is told above. I need therefore only remark, that with considerable difficulty I obtained a small supply of the Italian leaves, which I mixed in equal proportions with the leaves of the Virginia mulberry, (or *Morus rubra* of the botanists) and fed with them, and the result was that the Virginia leaves were eaten, not even excepting the stem, while the Italian was almost entirely rejected. Particular care was taken to have this experiment fully tried, and the result could not have arisen from any accidental or extraneous circumstances, but solely from the appetite of the worms. I also mixed with the leaves of the red, an equal weight of the leaves of the Black mulberry, and the former were eaten entirely, while the latter were entirely rejected. Hence I conclude that the Black or common mulberry, of our Northern forests, is worth but little to the silk culturist, while the red, or the mulberry of the latitudes of Virginia, is superior to the Italian, and almost equal to the Chinese tree. This tree, therefore, seems to be worthy the attention of the practical, as well as of the scientific culturist, and in order to elicit an investigation of its true value, I beg leave to make a few remarks upon it.

Virginia Mulberry.

This noble tree, (the *Morus rubra* of botanists) though found in great abundance in the middle and Southern latitudes of the United States, is, as far as my observation and information extends, very seldom seen North of latitude 40; and the few I have seen above this parallel are inferior to those below it, both in the beauty, amount, and size of their foliage, and the magnitude of their stalks. Between 39 and 40 degrees North, it is found in considerable abundance, and when surrounded by other forest trees, almost vies with the sugar-maple in height—but in open situations its stature is low, and its tendency is to throw out many branches. In its native State, it yields a large quantity of leaves of a bright glossy green, and smooth texture, many of which by actual trial, measure 12 inches in length and 9 in breadth, and weigh a quarter of a pound averdupoise a piece, and I am of opinion that these measures and weights can be much increased by judicious cultivation. This opinion is strengthened by some facts which have come to light in this neighborhood, and is confirmed by the opinions of several scientific and practical orchardists with whom I have conversed, and who have with me examined the tree.

The *Morus rubra* is a shy bearer, but can easily be propagated by cuttings, layers, and the other approved methods of propagating the Chinese tree. It has been doubted whether this tree will produce its kind from seed. Time will, however, determine this. I am disposed to favor a contrary opinion at present.

Should this species prove to be valuable, it will be a source of almost incalculable profit to the farmers of the South-West. Already acclimated, no danger need be apprehended from the severity of our winters; already in the country, no time need be wasted, nor expense incurred, to introduce it. At all events, it will be valuable for hedging,

as it grows with a rapidity and luxuriance far superior to the Italian, and but little, if any, inferior to the Chinese tree. One gentleman of this neighborhood intends planting several thousand next season, for fences only.

Another species of mulberry which I have discovered, yields a beautiful leaf, 11 inches long, and 8 wide, but which weighs only half as much as the rubra. It is a very fine and brilliant leaf, with a small lobe or ear on each side, about midway between its widest place and its point, which gives it a peculiar appearance. I know of but one in the neighborhood. The worm is voraciously fond of it, and I am inclined to think it a valuable variety, especially for second crops of worms, as it is much tenderer than any other with which I am acquainted.

Yours, &c. respectfully,

S. R. JONES.

SAYBROOK, JULY 31, 1837.

F. G. COMSTOCK, Esq.

Dear Sir,—I had some conversation with you last fall on the subject of mulberry trees and silk worms. I have this summer fed a few thousand of worms from the trimmings of White mulberry trees, that were planted in the spring of 1836: having never seen a worm or cocoon till those I raised myself. I send you a few for your opinion; 192 will weigh one pound; 205 of those that I have baked weigh one pound; my trees are from 4 to 6 feet high, with from three quarters to one-fourth inch butts.

Yours, respectfully,

WILLIAM WILLARD.

Answer by the Editor.—The cocoons are very good ones, and the silk of an excellent quality. Some of the largest are dupions (double cocoons) which are of little value on account of the difficulty of reeling them.

BURLINGTON, NEW JERSEY, 8 mo. 12th, 1837.

F. G. COMSTOCK,

Respected Friend,—In reading the Culturist, I perceive doubts expressed by some of thy correspondents, as to whether the *Morus multicaulis* will withstand the severe frosts of our climate, and a gentleman who very recently conversed with Judges Spencer and Buel of Albany, has just informed me that they rather favor the cultivation of the *Morus alba*, for a similar reason. Now it appears to me a matter of considerable importance to those who are about to engage in the silk culture, to have this point definitely settled. That the silk made from the *Morus multicaulis*, is at least equal in quality to that from the *Morus alba*, seems to be conceded by all who have made the comparison; and that the cost of making it from the former must be much less than from the latter, will be evident to every person who is familiar with the growth and foliage of the two species. The amount of foliage per acre will be much greater from the *multicaulis* than from the *alba*; and in consequence of the great difference in the size of the leaves, the expense of gathering food for a given number of worms, will not be one-third as great from the *multicaulis* as from the *alba*—consequently, the profits from the culture must be much increased by using the former instead of the latter, provided they will live during our severe winters. Would it not then be well to invite

information upon this subject, from correspondents, that all doubts may be speedily removed.

I saw a tree of the *Morus multicaulis* in March last, in the garden of a gentleman a few miles from this place, that had stood without any protection the last three winters. The owner informed me that the first winter it was killed down nearly to the surface of the ground, and in the following spring sent up 4 or 5 shoots; since then it has not been injured, and in the summer of 1836 he fed 1000 worms from its foliage, that made large and fine cocoons, yielding nearly half a pound of reeled silk. I obtained about 1000 cuttings from its extensive branches, and they grow well.

Again, the Messrs. Cheney, in this vicinity, have about fifty trees that were raised from layers in 1836, and stood last winter, without protection, in Manchester, Connecticut, and received no injury from the frost. They were alive, and sent out their shoots, this spring, to the very extremity.

There are a few of us here, who have determined to go largely into the silk culture, and are perfectly satisfied that the *Morus multicaulis* is the proper species. We have nearly or quite 300,000 trees that are growing finely in a light sandy soil; many of them from three and a half to four feet high, at present, and sending out strong side branches.

Very respectfully, thy friend,

SAMUEL R. GUMMERE.

By the Editor.—Though we think favorably of the proposition contained in the foregoing letter, and will thankfully receive and cheerfully publish facts and experiments relating to the acclimation of the *Morus multicaulis*, yet we do not consider it at all necessary to availing ourselves of this, the best of all kinds of the mulberry.

The experiments heretofore made have satisfied us that if the branches are destroyed by the severity of every winter, or to use a homely phrase, cut down every autumn to save their lives, the annual shoots upon an acre of land will yield more value in foliage than can be gathered from the same area covered with the White mulberry of any age whatever.

Remarks by the Editor of the Farmer and Gardener.

Mr. Gideon B. Smith, the former editor of this paper, who has done more than any other man in America to introduce the culture of this species of Mulberry into our country, has demonstrated by actual experiments, that all that is wanting to insure the life of the branches of it, is to cultivate it upon high, sandy soil, of moderate fertility. We have an excellent paper of his on the subject of the mulberry culture generally, and embracing this point in particular, which we shall take pleasure in laying before the public in our next.

Culture of the Morus Multicaulis, Silk Worms, &c.

[FROM THE FARMER AND GARDENER.]

Mr. Roberts.—The following paper on the subject of *Morus Multicaulis*, Silk, &c., has been drawn up in consequence of the numerous applications made to me for information on the various branches of the subject; and for the purpose of correcting numerous errors that continually pervade the public press. Every word I write is founded upon my own experience. Another object in drawing up this paper, is to endeavor to rescue the credit of many valuable improvements in the business, which have been filched from the author of them.

There can be no doubt with those who have made themselves acquainted with the qualities of the various varieties of the mulberry, that the New Chinese *species*, or *Morus Multicaulis*, is the best for feeding silk worms. I estimate the comparative value of the *Morus Multicaulis*, and the best White or Italian variety, as one to two; that is, I consider the *Morus Multicaulis* worth one hundred per cent. more than the White Italian. It saves nine-tenths of the labor in gathering the leaves, on account of their being at least ten times the size of those of the White. One pound of *Morus Multicaulis* leaves contains one-third more nutritive matter than a pound of the best White mulberry leaves; the reason of this being, there is very little woody fibre in the *Morus Multicaulis* leaves, and in the best White there is a very large portion, all which pass off in the form of excrement. The *Morus Multicaulis* affords leaves, and is not injured by the loss of them, the first season—all they require is a few to be left on the tops and ends of the branches. The White requires to be three or four years old before it can be used. The *Morus Multicaulis* is perfectly hardy, when grown on its own peculiar and natural soil, which is light, dry, and not over rich. On low rich soils, their growth is protracted to so late a season, that they do not ripen their wood, and of course they are killed to the ground in winter. I have uniformly grown them on high dry, rather sandy soil, and never lost a branch or a bud; while others, who planted them on low alluvial rich soils, have lost them every winter. Mr. Robert Sinclair, in the Farmer of the 8th of August, inst., gives the result of an experiment he tried last year in cultivating them on high ground, in which they proved perfectly hardy; whereas heretofore when he planted them on low rich soil, they had been killed down by the frost of winter. Mr. Sinclair forgot to state that this was an *old practice* with me, and that I had frequently remonstrated with him for planting them in this low rich ground. He states that it was an "experiment," leaving the public to infer that it originated with him; whereas he was well aware that I had long practised it with invariable success, and had frequently recommended it to him, as well as to the public.

The *Morus Multicaulis* is propagated with more facility than any other kind. A piece of last year's growth an inch long, with only one bud, is all that is wanted to make a tree 5 or 6 feet high in one season. Make a hot bed in the ordinary way, as for raising cabbage plants, about the first to the middle of March; take the limbs that grew last year, cut them in pieces, with one bud on each piece, stick them into the bed in a slanting position, inclining to the North with the bud on the South side, its point just even with the surface of the soil; water them every evening, shade them when the sun is powerful in the

middle of the day, and about the 1st of May they will be about the size of cabbage plants, and ready to be set out where they are to grow; take them up as you do cabbage plants, set them out, water them freely for a few days, put a cabbage leaf or any such thing over them for a day or two to shade them, and they will grow off, and form fine trees 4 to 6 feet high the same season. This has always been my method of propagating them, and the plan originated with me. I was surprised to find last year, Mr. Sinclair endeavored to obtain the credit of suggesting this method of propagating *Morus Multicaulis* trees. He published in the Farmer and Gardener and other papers, that he had succeeded in propagating them from single buds, and in this, as in the case above noticed, leaving the public to infer that he was the discoverer of the new method, when the fact is that *I instructed him in the whole process*. It is to me a matter of no moment in a pecuniary point of view, for my only object is and has been the furtherance of my country's interest in this respect; but is rather mortifying, after laborious experiments and study,—working for nothing and finding one's self, to have even the *credit* of our labors and discoveries filched from us.

In extending the mulberry orchard, take the whole top of the tree raised as above last year, cut off three or four inches from the ground, cut it up and plant the cuttings as above. The old root will send up half a dozen shoots, each of which will be as large as the whole tree was before it was cut down, and thus furnish more cuttings for the next year.

If the trees are raised on the proper soil, they will want no protection; if they are growing on low rich, or any low soil, they must be taken up in the fall, and "laid by the heels," either in a dry cellar or a shed open to the South. Lay them in a slanting position, close together, burying the roots perfectly in the ground.

If cuttings are desired to be kept through the winter, the best way is to dig a hole in some high dry place, and bury them a foot or two in the ground. They may be kept also by being wrapped in green live moss from the swamps, and placed in an ordinary cellar. I have kept them all winter in my office, by tying them in a close bundle and setting the butt ends in a basin of water, so that the water covered about an inch of the ends. In this way they were not only preserved, but the buds began to grow too soon, from the warmth of the office.

Many persons recommend that the trees be cut down to within three inches of the ground, and the stumps covered to protect them, and feeding silkworms from the leaves of the young shoots. This is bad practice, and should not be followed—besides, it is not necessary, as, properly cultivated in a proper soil, as above stated, they want no protection. The objections to the practice are—the lateness of the season before the shoots will be large enough to afford a sufficient supply of leaves; and the succulence of the leaves from these young shoots. Both these objections render the practice inadmissible; your worms will starve to death before the shoots will afford leaves; and if you *can* keep them alive till leaves are produced, you will be very apt to lose them by disease, produced from feeding them with the too succulent leaves.

The *Morus Multicaulis* cannot be propagated to any extent from seed, simply because the trees produce so little that it will not pay for saving even if it sold at its weight in diamonds. The whole of the

seed that has been sold for some years in this country, as *Morus Multicaulis* seed, was spurious, and I was so well aware of its spurious character, that I have never bought or used a grain of it. I have used all my influence to prevent my friends and correspondents from being imposed upon by it; but unfortunately, self-experience is the only school for some people. I assert that no genuine *Morus Multicaulis* seed can be offered for sale here or elsewhere; and time will prove the truth of the assertion. I would not be uncharitable, but I verily believe that the idea that the *Morus Multicaulis* was a variety and not a species, and therefore that its seed would not produce its like, originated with those who were engaged in speculating in "*Morus Multicaulis* seed," and that its object was to cover the imposition of other seed upon the public for *Morus Multicaulis* seed. As it produced all sorts of Mulberry trees, except *Morus Multicaulis*, it was desirable to attempt an excuse. And this was resorted to—lame and impotent as it is. I assert positively that it is a distinct species, that its seed produces its like exactly, as I can at any time satisfy any person, having trees raised from seed by myself. But it is of little importance whether the seed will produce the true *Morus Multicaulis* or not, as the seed cannot be obtained. I have the oldest tree in America, and it never produces good seed enough to make it an object worthy of notice; besides the trouble of keeping weeds down, &c., and the ease with which it is multiplied by cuttings, would prevent my using seed, if ever so abundant and cheap.

There are many mulberry trees in this country called *Morus Multicaulis*, that are not the true kind. I have seen hundreds of such. They are the broad leaved variety of the white mulberry. The *Morus Multicaulis* differs entirely from all others in several respects. Its specific name points out one of its peculiar characters, viz. *multicaulis*. While all others form single bodied trees, the *multicaulis* continues sending up new stalks from the crown of the root, and thus growing in clusters of bushes like the lilac, hazle, &c.—hence the name *multicaulis*, *many stalked*. The leaves are not only larger than any other kind, but their form is different from all others. The leaf is invariably *bowled*, so much so that it is impossible to spread it out flat without tearing the sides. This form is not seen very conspicuously in the young seedling, but as soon as the plants get a foot or two high, and the leaves attain half their proper size, it is very distinct. The leaves are so large that they always hang pendulous, when full grown, and somewhat folded lengthwise. These peculiarities will enable any one to distinguish the true tree from all others.

Let me advise purchasers of *multicaulis* trees to be cautious in receiving budded or grafted trees. They are worth nothing but for cuttings, their roots are of no use; while those on their own roots have the advantage of the roots to furnish new supplies of cuttings from year to year. Budded and grafted trees also may be lost altogether by the perishing of the tops in transportation; while if the whole top of a tree on its own roots perishes, only the cuttings of one year will be lost, the root will live, and furnish abundance of cuttings for another year.

No other preparation of the ground is necessary than turning it over once to destroy grass and weeds, and then keeping the ground clean during their growth. The poorest ground need not be manured, though it would be best if in tolerable condition. Any ground that would produce ten bushels of corn to the acre, will be good enough for them.

The fall season is the best time to obtain the trees, and the spring the best to plant them out. I would recommend them being obtained in the fall and kept "laid by the heels" till April, and then set in their proper places. The reason they ought to be obtained in the fall is, that they may be ready to set out at the proper season in the spring; whereas, if not obtained till spring, various accidents and delays may cause them to come too late, and they may thus be lost or retarded in their growth, so that the next winter may injure them.

Silkworms.—A radical error of our countrymen in commencing the culture of silk, is their beginning at the wrong end. Almost all of them obtain a supply of silkworm eggs first, and then go in search of mulberry leaves to feed the young worms with. Because the forest is full of the native mulberry, and the fields studded with white mulberry trees, they think they can readily obtain a sufficient supply of leaves for two or three hundred thousand worms "to begin with;" and so they can for the first two or three weeks, but during the 3d, 4th and 5th week, when the worms eat almost their own weight of leaf every day, and when it is absolutely necessary to the full accomplishment of their object that they should have a full supply of fresh leaves continually before them, the supply fails, the labor of gathering a sufficient quantity from trees scattered through the woods, and almost inaccessible from their height, is found to be insurmountable, and the worms are stinted in their food, dwindle along three or four weeks more half-starved, and at last spin an imperfect cocoon that is good for nothing. Many persons do worse than this. When the worms enter their fourth stage and consume a full quantity of leaf, they are abandoned altogether and starve to death. Millions upon millions of these interesting insects have perished in this way within my own knowledge. Some years since I visited a person a few miles from the city, who had been boasting of his large number of worms a week or two previously. I found them scattered over the floors, walls and ceiling of the large room, wandering about in search of food, and half famished. He said he found he could not get leaves to feed a tenth part of them, and had abandoned them in despair. There must have been a million at least. They all perished. He never could have obtained leaves enough to feed 50,000 worms from all the trees within his reach.

The proper way is to secure a convenient mulberry orchard. It should be as near the laboratory as possible, and should be sufficiently extensive to supply twice the number of worms you calculate on keeping, as a security against accidents, &c. After you have secured the mulberry trees, then obtain the silkworms. If you have no experience with them, begin with ten thousand; and the next year increase the number. Ten thousand worms will be enough to learn you how to manage a larger number, and they will furnish cocoons enough for you to learn to reel silk with, and a sufficient supply of eggs for another year. Use all these cocoons to learn to reel with—don't try to make the finer qualities of silk, but learn to reel any thing. The object is to "get the use of their tools." Learn to catch the fibre and join it to the thread expeditiously; adapt your sense of touch in the fingers to the extremely fine fibre, that you may be able to *feel it*; enable yourself to understand the proper temperature of the water for dissolving the gum of the cocoons, that you may be able to make the fibre run or unwind well. All these little details, simple when understood, and easily acquired, but absolutely necessary to a good

reeler, are to be learned only from practice—patient, persevering practice, unchecked by feelings of interest or fear of losing cocoons. But a few weeks, even a few days, are sufficient for the accomplishment of the object.

It is not my purpose now to give instructions in the whole art of reeling, or managing silkworms; that object has been fully accomplished in various publications in the *Farmer*, in pamphlets, and books. The present paper is merely intended to supply deficiencies in other publications, to call attention to some prominent points, and to correct certain errors.

Let me urge attention to cleanliness in the laboratory, essential to the comfort and health of the proprietor and his assistants, as well as to the success of his business. Always keep a box or some other vessel of chloride of lime in the room with the worms. A jar with a pound or two of it standing open, will keep the air in the room sweet, and thus protect the worms from disease. If from inattention your worms become affected with the *tripes*,* lose not a moment in sprinkling the floor with a solution of chloride of lime, and set saucers of it in various places. It will speedily cure those that are sick, and prevent any further extension of the disease.

This remedy for the *tripes* is also my own discovery. It was published in the *American Farmer*, and the *Farmer* was regularly received by several members of the society of Agricultural Science in Paris; notwithstanding which, many months after its publication in the *Farmer*, a paper was read before that society giving the details of the important discovery by a citizen of France, that chloride of lime was a sure remedy for the *tripes*. However, it matters little to the public who is entitled to the credit of so important a discovery, so long as that public has the advantage of it. But I would suggest that there will be little encouragement to laborers in the fields of scientific discovery, if they are to derive *neither* interest nor credit from the results. The public is so prone to forgetfulness on this subject, that most discoverers now-a-days resort to patents to enforce their claims, and if the public will not be voluntarily just, it seems no more than proper that some such process should be adopted.

In their anxiety for improvements, those who enter upon the silk business are too apt to adopt useless if not injurious innovation. There are many parts of the French and Italian practice that may well be improved, some of which are useless, and some few ridiculously so. But we must not infer thence that their whole practice is wrong, and that we are capable of substituting an entire new one. Among all our experiments, we find no one that tries the brush or twigs universally used by the French and Italians for the worms to climb and spin their cocoons on. We are continually inventing new plans for this part of the work, such as building frames, &c. But it seems to me that the simple brush that has answered the purpose for hundreds of

* *The Tripes* is a disease among silkworms analogous to the plague in the human family. It is caused by foul air, in the room, generally in damp weather. The foul air proceeds from putrifying vegetable substances, such as stale leaves, &c. The first symptom shows itself in the worms ceasing to eat, throwing their heads back, and becoming of a black color. They soon turn quite black and die in an hour or two, and mortify in another hour, when they smell very badly. The disease will spread over the largest establishment in twenty-four hours, if not suppressed by the free use of chloride of lime.

years in other parts of the world, might be safely adopted in this. I have escaped this symptom of the mania so far as only to propose the use of *broom-corn brush*, as being more convenient and simple than the brush of the French. It answers the purpose admirably with me.

Again, our people are endeavoring to make themselves and the public believe that we can produce successive crops of silkworms in the same season, so that the work of producing cocoons may be extended through the whole summer, instead of being confined to about six weeks in May and June. If this could have been profitably done, the French and Italians would have long since found it out; but we are not left with the conjectural uncertainty of an *if*;—it was fairly tried years ago, and resulted, as any body but one gifted with the sanguinary mind of a new beginner might have known, in an unprofitable expenditure of time and labor. The eggs may be forced to hatch the same season they are produced; but it is unnatural, and they hatch so irregularly, that a profitable result cannot be obtained.*

I see by the newspapers that one of our new beginners has discovered and taken under his care a new species of silkworm, an American silkworm,—whose cocoon is some eight or ten times as heavy as that of the common,—and from which he expects to produce wonderful results. Many years since many of these American silkworms were sent to me from the South and the North, from the East and the West; and I was then, as he is now, elated at the idea of introducing this new and valuable improvement in the silk business; but the worms would not feed kindly, the moths flew away as soon as they escaped the cocoons, and the cocoons could not be reeled. Worse than that, even when reeled the silk was coarse and harsh. Nothing that I could think of would dissolve the gum of the cocoons, even with twenty-four hours soaking. Of course I let the moths fly away. There are several varieties of worms that make cocoons in this country, but it does not follow that the fibre of those cocoons is as valuable as that of the true silkworm.

The best and simplest hurdle for the accommodation of silkworms, is that suggested in my Treatise published in 1830 in the American Farmer, and in pamphlet form, and which I have always used when I had worms. It is made as follows—a frame 5 or 6 feet long and 3 wide, made of plank 2 inches wide and $1\frac{1}{2}$ thick; like the outside of a window-sash; make holes through both side and end pieces with a brad-awl about three-eighths of an inch apart; pass strong twine through the holes lengthwise and then crosswise, and thus form a net work bottom for the hurdle. This will allow the dung of the worms to fall through upon a similar frame, with a paper bottom that should be placed under it. It saves a good deal of labor in cleaning off the litter, and permits air to pass up among the worms and leaves.

I perceive that this hurdle is also claimed by our ingenious coun-

* Since the above was written, I have learned that some gentleman in New Jersey are enabled to prolong the season of feeding worms, by keeping the eggs in an ice house, and bringing out portions as they want them through the summer. If put into an ice house immediately after they are produced, and kept there, this plan may answer the purpose; but if put there on the approach of warm weather in the spring, they will hatch, even in the midst of the ice, as I know from experience.

trymen at the East, of their *invention*. Pity that their ingenuousness did not equal their ingenuity.

It is a common error to suppose that the young worms require young and tender leaves to feed on. They, on the contrary, eat the most mature leaf with as much greediness when a day old as they do when full grown. The French recommend cutting the leaves into small pieces, and have a knife for this purpose; this practice I found injudicious, as the worms press upon the mass and make as it were a carpet of it, an dmuch leaf is lost. I prefer laying on the leaves whole—the worms will speedily cut them up for themselves. This practice is only equalled by the French recommendation, to separate the male and female moths after having been together six hours in the act of copulation. Following their directions, for in those times I had no other guide than the French books, I separated all my moths after six hours, and to my mortification one half my eggs were *not fecundated*. After that I allowed the moths to take their own course in this affair, and all my eggs were thenceforth good.

In conclusion, I would recommend those who desire to enter upon the silk business, in the first place to secure a supply of *Morus Multi-caulis* trees, and establish an orchard; then go ahead—leaving experiments and improvements upon the well known and successful methods and furniture, to be suggested by experience as they progress.

GIDEON B. SMITH.

*A Series of Experiments, together with their Results, on
Wheat, Corn, &c.*

[FROM THE GENESEE FARMER.]

1st. In order to ascertain, if practicable, an easy method of cleansing wheat intended for seed, especially of separating oats from spring wheat, brine was made by the solution of salt in water, just strong enough to bear up an egg, and cause a very small part of it to rise and float above the surface of the brine. Into a pail, filled nearly full of brine thus prepared, two or three handfulls of well ripened and plump oats were dropped at different times. None of them sunk—all floated on the surface of the brine, and were taken off with a skimmer. Spring wheat is apt to be infested with oats, and this experiment suggests an easy and sure method of cleansing so much of it as is intended for seed. It may be proper to remark here, that a parcel of oats was dropped into water not impregnated with salt, and that all of them sunk. That there is no danger of injuring the seed, by dropping it into brine strong enough to bear up an egg, will appear from experiments hereafter to be recorded.

2d. A parcel of chess seeds was dropped into the brine used in the above experiment, and many of them sunk. From this it appears, that chess cannot be separated from wheat, as oats may be, by dropping into brine.

3d. Twenty kernels of spring wheat were put into the ground, which had been steeped 15 minutes in brine strong enough to bear up an egg. Eighteen of them came up.

4th. Twenty kernels of the like wheat were put into the ground, which had been steeped 24 hours in brine strong enough to bear up

an egg. Seventeen of them came up. Although in these two experiments, there was a failure of coming up in one, of two, and in the other of three kernels, yet as these two parcels, differing so much as to the time they were in the steep, came up promptly and simultaneously, came up too with thrifty blades, and blades equally so, I can scarcely impute this small failure to the effect of the brine. It is, I think, safe to prepare seed wheat, whatever may be the object, by steeping it at least 24 hours in brine strong enough to bear up an egg. How much stronger the brine might be, and do no harm, or how much longer the steeping process might safely be continued, my experiments do not show. There can be no doubt that lye, produced by leaching ashes, and made strong enough to bear up an egg, would answer as well as brine for separating oats from spring wheat. Nor can it, I think, be doubted that, whatever might be the object of steeping, it would be equally safe, as well as equally efficacious, as a steep for seed wheat. Many years since, to prevent smut, I steeped a parcel of seed wheat in very strong lye, taken from a pot-ashery. This was too strong. It destroyed the vital powers of the seed, produced a failure, and rendered it necessary to sow again.

5th. It being reported that scalding seed peas, by the application of boiling water, would secure the crop from damages by the pea-bug, the object of this experiment, together with the three following, was to ascertain whether boiling water could be applied to peas, without endangering their vital principles. For this purpose, twenty kernels of peas were planted, on which boiling water had been poured and turned off immediately. Nineteen of them came up.

6th. Twenty kernels of peas were planted, on which boiling water had been poured, and been kept on them one minute. Nineteen of them came up.

7th. Twenty kernels of peas were planted, on which boiling water had been poured, and had been kept on them three minutes. Nineteen of them came up.

8th. Twenty kernels of peas were planted in their natural condition, no hot water having been applied to them. The whole twenty came up. It will be seen here that, of the parcel of seeds which had not been scalded, all came up, while in connection with each of the other parcels, there was a failure of one kernel. Be this accounted for as it may, the experiments have shown to my satisfaction, that boiling water may be applied to peas, and be kept on them at least three minutes, without any material detriment to the seed. It should be remarked here, that the several parcels came up simultaneously, and without any perceptible difference as to thriftiness, and symptoms of good health. The parcel which had not been scalded, did not appear, in any respect, to have the advantage of the others, except that *all* came up, while, in connection with each of the others, there was a failure of one kernel.

The manner in which these, and all my other hot-water experiments, were conducted, was, to put twenty kernels into a large coffee cup, sufficiently large to contain a half pint or more, and then fill the cup about half full of boiling water, taken immediately from a kettle hanging over the fire. The heat, I think, must have been as intense, as would be that produced by pouring two pailfulls of boiling water into a tub containing one bushel of peas, or other grain. In each of my experiments, the seed was planted immediately after the hot water was turned off. If peas are to be scalded for the use of field culture,

it will doubtless be prudent to spread them for cooling, as soon as they are separated from the hot water. It may be advisable too to sow them as soon thereafter as practicable, though, if they are readily cooled, as they may be by spreading, I should hardly think it necessary to be in a hurry to sow.

9th. Twenty kernels of corn were planted, on which boiling water had been poured, and turned off immediately. Eighteen of them came up.

10th. Twenty kernels of corn were planted, on which boiling water had been poured, and kept on one minute. Fifteen of them came up.

11th. Twenty kernels of corn were planted in their natural condition, no hot water having been applied to them. The whole of those came up. In regard to these experiments of the corn, I am constrained to remark, that they proved to my satisfaction that hot water is a dangerous thing to be applied to seed corn. For although three-fourths of the parcel which had been kept in hot water the longest, viz., one minute, eventually came up, yet they came up very tardily, not so soon by two or three days, as those which had not been scalded. The blades, when they came up, were feeble, and of sickly aspect, differing entirely from those to which no hot water had been applied. In regard to the other parcel from which the hot water was turned off immediately, the same indications were no less real and scarcely less perceptible, yet not quite so striking. These two were, in coming up, considerably behind those which had not been scalded, and their blades, when they did come, were manifestly inferior. The results of these experiments were such as to leave no doubt in my mind, that the seed had received an injury from the hot water. Contrary to opinions heretofore entertained by myself, and perhaps by many others, I now believe it dangerous to apply hot water to seed corn.

Instead of hastening the progress of its vegetation, as has been supposed, it probably has the contrary effect, besides distempering and debilitating its vital powers. But that it is not so in regard to peas, the experiments above recorded show very satisfactorily. The scalded peas came up as readily, and were as thrifty as those which had not been scalded.

12th. Twenty kernels of fall or winter wheat were put into the ground, on which boiling water had been poured, and kept on one minute. None of them came up—all failed. This single experiment indicates danger in applying hot water to seed wheat. It will not endure the effect of boiling water remaining on it one minute. Scalding seed wheat at all, should, I think, be regarded as a dangerous experiment.

13th. Twenty kernels of wheat, as badly blasted, shrunk and shrivelled as I ever saw, were put into the ground. Nearly all of them came up. This experiment proves that badly blasted wheat will answer for seed, or that it will germinate and grow; but it by no means proves that such wheat should be used for seed, except in cases of necessity. It is unquestionably a true doctrine, and a doctrine of universal application, that the more perfect the parent is, the more perfect the progeny may be expected to be. No other than wheat of the first quality should be used for seed, when such can be obtained.

Here ends a series of experiments, the whole of which were commenced and finished by myself, on the twentieth day of September last, results only remaining at that time to be longer waited for.

Oct. 27th, 1837.

DAN BRADLEY.

Crittenden, or Baden Corn.

[FROM THE FRANKLIN FARMER.]

Locust Hill, Franklin Co. Ky., Sept. 1, 1837.

Dear Sir,—In compliance with your request, I send you below a minute description of a small piece of corn, of a rare and valuable variety; the seed of which was presented to me last spring by the Hon. John J. Crittenden, who brought them from Washington City; and which I propose shall be called the *Crittenden*, as a merited compliment to his public spirit in introducing it.

It is a soft white corn of the fourteen rowed variety, with a white cob of middle size in proportion to the grains, which are neither very deep nor very broad. It was originated by Mr. Baden, of Maryland, (whose name it bears) who, by planting from the best top-ears of stalk which produced several ears, through a course of near twenty years, has produced this new variety; the chief peculiarity of which is in producing from two to eight ears upon a stalk.

Mr. Baden directs it to be planted in hills five feet apart each way, and two stalks in a hill; but in order to be sure that the corn should show its peculiarity, I planted it in moderately rich ground, without manure, in hills five feet apart each way, some with two, some with three, and some few with four stalks in a hill. I received about a half pint in the grain, and on the 15th of May last I planted it in a situation remote from other corn. The only cultivation which it has received, is three ploughings, one hoeing, and one raking. The ground measures ten by forty yards, about half of which is shaded in the evening by an adjacent woodland, which has obviously diminished the product.

The ground contains sixty-three hills, besides some missing hills. The hills contain six hundred and seventy-eight ears, besides some very small nubbins.

This will make an average of between nine and ten ears to a hill.

One hill with three stalks has twelve ears in it, six of which are on one stalk.

One hill of four stalks has seven ears on it.

One hill of three stalks has seven ears, which measure upon an average eight inches in length; which I think is not much over the average length of the whole 678 ears. Many of the stalks have four and five ears on them, and many of the hills have seven, eight, nine, and ten ears to the hill. The stalks, I think, will average ten feet in height; and the ears are generally about six feet from the ground.

As the manner in which the corn will be gathered, will preclude me from measuring the product, I have given the above facts, so that those who choose may calculate it. From this experiment I would infer, that when planted in rich ground, at the proper season, and fully cultivated, the products cannot fall far short of double that of the common corn of the country.

To the farmers of the country, this new variety is certainly of great and surpassing value, on account of its intrinsic merits, but incomparably more so, because it illustrates the fact, that by pursuing the same mode of selecting our seed, we may bring the large yellow corn or large white yorkcheat corn, to the same high state of perfection. And what a magnificent sight it would be to see a stalk of our large yellow corn

bearing six ears, each measuring from 12 to 15 inches in length! And what a glorious immortality awaits that farmer of Kentucky who shall achieve it! Similar has been the fortune of Mr. Baden of Maryland.

The corn has been planted four months, and is now ripening. Five-sixths of it are for distribution, and those who take an interest in it are invited to call, examine and receive it.

With sentiments of esteem, your friend,

ROBERT W. SCOTT.

The Culture of Mangel Wurtzel or Field Beet.

[FROM THE FARMER AND GARDENER.]

A few remarks on the culture of this crop, although the season has passed for commencing it, may not be unacceptable.

The Soil

Is best when a clayey loam; but any soil if ploughed deep and well manured, will produce good crops, as the principal requisite is depth and fertility.

The Sowing

Should be done in the early part of May, although it is frequently performed later. Where the ground is very moist, it should be sown upon ridges; but in ordinary cases, it succeeds best when planted in drills without ridging. T. and H. Little, of Newbury, Mass., who raised upwards of three tons to one acre, prepared the ground and sowed in the following manner: After one deep ploughing, the ground was furrowed two and a half feet apart, and the manure put into the furrows, and covered with the plough; a roller was then passed on the top of the ridge thus formed, to pulverize the lumps, level the surface, and press the soil and manure together. The seed were then dibbled with the finger over the manure, about 6 or 8 inches apart. John Hare Powel sowed his crop thus:—"The holes for the seed were made by a wheel, containing pegs in its circumference, which penetrated the ground about an inch, leaving intervals of four inches; the rows were made two feet asunder; two capsules (or berries) were dropped in each hole; the wheel of a common barrow was then passed over them, thus compressing the earth, and leaving a slight rut for the retention of moisture.

The quantity of Seed

Per acre should be about four pounds; for although this is a large allowance, the expense is small when compared with the insurance of an even crop. Great care should be taken that the seed of the common red and white beet is not mixed with it. Unless the ground be very moist, the seed, before sowing, should be soaked about 48 hours in soft water. After the plants have come up, they should be thinned to about eight inches distance from each other in the rows.

The after Culture,

Consists principally in a free use of the cultivator; and in keeping the land perfectly clear of weeds. Col. Powel ascribes his success in

the culture of this crop, to deep and thorough ploughing; to the use of cultivators, which complete the production of fine tilth; to the destruction of weeds on their first appearance; to leaving the smallest space upon which a horse can walk between the rows; and above all, *to planting the seeds of a proper kind upon a surface which is kept perfectly flat.* Gideon B. Smith, of Baltimore, in 1832 planted one-sixth of an acre, which had been intended for early corn, and had been manured the previous year. The seed were sown in drills two feet asunder, and eight inches apart in the drills, and covered as corn. When the plants were up, a weeding hoe was passed over the field, and afterwards a small plough run through it twice, clearing out the weeds with a hoe. This was all the cultivation it had; and the whole labor, including the original preparation of the ground, did not exceed two full days work for one man. The crop was upwards of 75 bushels, and might have been much larger, as there were many vacant places of 6 or 8 feet in length in the rows, and other places where the roots were injured by being crowded. The soil was a fair medium mould, a mixture of clay, sand, and vegetable matter.

The Produce per Acre,

Under ordinary culture, may be estimated from 600 to 1000 bushels. Where however, the ground is ploughed very deep, well manured, and well cultivated, much larger crops have been obtained, of which a few instances are here given.

Gideon Foster, of Charleston, Middlesex co., Mass., raised 43 tons to the acre.

The premium crop of Tristram and Henry Little, of Newbury, Mass., was 33 tons 10 cwt. and 14 lbs. to an acre, or *more than fourteen hundred bushels.*

Col. Powel inclosed certificates to the President of the Pennsylvania Agricultural Society, showing that *sixteen hundred and thirty-four bushels* of mangel wurtzel, weighing 78,448 pounds, were produced upon an acre and fourteen perches; and a part of the same field containing thirteen contiguous rows, produced at the rate of *two thousand and fifty-five bushels per acre*, weighing 44 tons, 5 cwt. and 27 lbs.

Henry Thompson, of Baltimore, raised in 1833, on less than one-eleventh of an acre, 5 tons, 14 cwt. and 3 qrs., or at the rate of about *sixty tons to the acre.*

In good land, single roots of the mangel wurtzel often weigh nine or ten pounds, and sometimes even *fourteen or fifteen pounds each*: and J. A. Kenrick, of Newton, Mass., raised in 1833, a single root weighing no less than *thirty-six pounds.*

Uses.

This root is admirably adapted for feeding nearly all domestic animals. It is the best of known food for store swine; and swine fatten upon it, yielding firm pork of good flavor, when fed to them raw, equally well as upon boiled potatoes, by which the fuel and labor of boiling is saved.

Col. Powel says:

"My neat cattle prefer mangel wurtzel to any other root which I have offered to them. I have found its effects in producing large secretions of good milk, very great. * * * Its application as food for sheep is not the least important of its uses. Ewes year usually at the season when grass cannot be supplied. The health of them-

selves and the thrift of their lambs essentially depend upon succulent food being had. I am inclined to think that no small portion of the success which English breeders have met, is to be ascribed to the large stores of roots, which they always have at command."

In autumn, when the quantity of milk from cows often diminishes greatly, it may be restored by cutting the leaves of this plant, and feeding them. In some instances, the quantity has been doubled by this means. The leaves soon grow again, and may be cut every fortnight.* Cows feed twice a day in winter, upon 20 pounds of the roots at a time, together with 4 or 5 pounds of hay or chopped straw, will, it is asserted, give as much milk as in summer.

In some instances when fed to cattle and sheep, this root is said to have produced *scouring*. This may be owing either to the soil adhering to the roots when eaten, or to the sudden commencement of feeding on them exclusively, instead of their being mixed with a proper proportion of dry food, such as hay, meal, or chopped straw.

This crop has several important advantages in its cultivation. It is little affected by changes of the weather; suffers little from drought; thrives in most soils; is not attacked by any insect, and prepares the ground well for succeeding crops. The roots may be kept sound and fresh for eight or ten months.

Farmers who value their land, would find it greatly to their interest to direct their attention more to the cultivation of this crop. It has been found that two tons of mangel wurzel are equal to one of hay for feeding cattle in general. Any one may readily calculate from this, how much greater a number of cattle may be supported by this means, from a given quantity of land, than by the usual mode of feeding them exclusively on grass and hay. Supposing for instance that thirty tons of mangel wurzel are the average product per acre, then we shall have an amount from one acre alone equal to from ten to fifteen tons of hay. Now if a method should be devised for raising this amount of hay from an acre, it would excite universal attention and inquiry; but this crop, although possessing advantages not less important, is almost entirely neglected.

Hemp and Sunflower Seed Oil.

[FROM THE BUCKEYE PLOUGH BOY.]

Dr. Fry—As you have given notice that you are about to publish an Agricultural Journal, and solicit communications "relating to farming, gardening and the arts," I have been induced to send you a few facts, which, perhaps, may lead to beneficial results. Having been engaged for some years in the manufacture of linseed oil, I find that many resort to it for light, which is little better than none, and the cost of good sperm oil, renders that too expensive for common use for the poorer classes of people in this western country. In order to obtain a substitute, which is much wanted, trials have been made to obtain oil from grain to supply its place. Oil has been made from

* It is probable, however, that this production of new leaves is in a greater or less degree, at the expense of the root, although very large crops have been raised, where this course has been pursued.

corn, but the expense was nearly equal to sperm oil, and the quantity obtained has been very small. Last fall a barrel of hemp seed came to the mill, from which I expressed some oil without cracking the seed, and found it equal to the best sperm oil. I then took the remainder of the seed, and ground and pressed it in the usual way of making linseed oil, which I found to be good lamp oil, emitting a clear and brilliant light. It produced about one gallon of oil to the bushel. I am unable to say how many bushels can be raised from an acre of ground; but have sowed a little to try the experiment on our soil, and intend to distribute the seed to such as may be disposed to make further trial of it. I think, however, that good lamp oil can be made cheaper from sunflower seed. A quantity of the latter was sent to the mill about the same time in the fall, by a gentleman of Medina county. I had several experiments upon it, and found it would yield over a gallon to the bushel, which, after being clarified, proved to be as good as common sperm oil, and far better than the usual run of summer-strained. On inquiry, the gentleman who brought the seed to the mill, stated that he sowed twelve rods of ground in an orchard much shaded, from which he gathered seven bushels, without any cultivation except ploughing, and he thinks that one half of the seed had previously got shelled out, and lost upon the ground. Admitting this to have been the case, these twelve rods thus unfavorably situated at the rate of 186 bushels to the acre, will make as many gallons of oil. It can be manufactured for 25 cents per gallon, and if we estimate its value even as low as 75 cents per gallon, it will still net the producer \$92 to the acre. I have sown a few rods of ground, which from appearances now, will produce a much greater yield. The seed makes an excellent food for fowls, being worth for that purpose about the same as an equal weight of corn. There are three kinds of seed, of which I consider the striped the best. If it shall be thought of sufficient importance to the public, I will in a future number describe the mode of cultivation, and also the manner of manufacturing and clarifying the oil.

Respectfully yours,

N. ROSE.

Cuyahoga Falls, August 1837.

[I have received from a friend a small quantity of hemp seed oil, and find that it answers a very good purpose to burn in lamps, but at the price at which the seed usually sells, it will never answer to manufacture into oil. I am not prepared to say that it could not be raised so as to be afforded at a price that it would answer. Will some reader of the Plough Boy have the goodness to state what quantity of seed can be raised to the acre, and the cost of cultivation?

The sunflower can no doubt be cultivated at a profit. Willich says that "he does not know of any vegetable that is likely to afford greater advantages to an industrious cultivator, who possesses a few rods of ground, which is not sufficiently fertile for corn or pasture grass." It appears by this author that every part of this plant can be advantageously used. "The seed yields a large quantity of oil which is sweet and palatable, the young flower cups may be dressed and eaten like artichokes, its strong outer coat may be used for cordage, and the body of the stalk for fuel." If the oil will answer a good purpose to burn in lamps, it will no doubt be the cheapest way common people can obtain light. I see that Mr. Colman, who has been appointed by the Legislature of Massachusetts, to make an agricultural survey

of the State, has, among numerous other subjects, made inquiries relative to the cultivation of sunflower seed for oil.—*Ed.*]

*On the Insalubrity of the Air of Marshes, in communication with the Sea; by M. GEORGINI, of Lucca.**

[FROM THE MEDICO-CHIRURGICAL REVIEW.]

The deleterious influence of marshes on the health of those who live in their neighborhood, is but too well known; and is a subject which well merits the attention both of the physician and the legislator. It is also well known, though hitherto not clearly accounted for, that all marshes, even when close together, and consequently under the same climatorial circumstances, are not equally inimical to human health and human life. Of this fact Italy offers a striking example. In certain parts of that interesting country, the vicinity of marshes does not diminish the fertility or the population; while, in other localities, it exercises the most baneful powers. It was long ago conjectured, but not proved, that admixture of sea water with that of marshes, increased the malignity of the exhalations issuing thence, and the problem would now appear to be solved by events which have taken place in Italy.

Between the Ligurian Appennines and the Mediterranean sea, lies a marshy tract of coast, about twelve Italian miles in length, and varying from two to four in breadth, traversed by several mountain streams or rather torrents, which are discharged into the ocean, or into the morasses bordering thereon. The marshy plain in question may be considered as an alluvion deposited by the rivers Arno and Serchio, and is bounded on the sea-line by a sort of embankment, only a few feet above the level of the ocean. The waters collected by rains, &c. are discharged from three basins into the sea by natural or artificial canals. The level of the stagnant waters is below high-water mark, and somewhat above the ocean during ebb tide. In consequence of this circumstance, and before any hydraulic works were constructed, the flood tide changed the currents of the different exutories, and caused them to run backwards into the morasses, mixed, of course, with a proportion of sea-water. While this was the state of things, the population of this wretched district was very scanty; and Viareggio, now a large town, consisted of only a few huts. The natives, who were few in number, were constant victims to diseases of the liver and spleen—the children were sickly—and old men were no where to be seen. The unhealthiness of the place had, in fact, arisen to such a height, that the culture of the olive tree, with which this fertile tract abounded, was almost entirely abandoned to strangers, who, of course, fell annual victims to the malaria of the marshes. Various attempts were made to remedy the evil; and at length, about the year 1741, a complete stop was put to it, by the construction of valvular gates, which permitted the efflux of the waters from the marshes, but prevented any reflux of water from the ocean. The effect was instantaneous and surprising. The insalubrity disappeared immediately these flood-gates were completed, and only partially re-appeared when they

* Archives Générales.

were out of order, and permitted the admixture of salt and fresh water in the marshes. Viareggio is now so salubrious as to be much frequented by the neighboring wealthy inhabitants, as a place for sea-bathing and enjoying the delightful sea-breezes in the heat of summer. The population has rapidly increased, as a matter of course, since the happy change in the climate, and Viareggio, which, in 1733, contained only 330 inhabitants, now shows a population of between four and five thousand.

That this fortunate change was owing to the means above-mentioned, we are not disposed to deny; nor do we doubt that the admixture of salt and marshy water may have a deleterious influence in the production of malaria; but it is also unquestionable that the most deleterious exhalations issue from morasses which have no communication whatever with the sea.

Rotting of Timber in certain Situations.

[FROM THE JOURNAL OF SCIENCE AND ARTS.]

In the year 1801, I built a ware-house on my lot in Union-street in Schenectady. The cellar was dug about four feet deep, and the stone wall a foot or two deeper. I left no opening in the walls for door or window. The floor beams were of excellent pitch pine timber, of twelve by twelve inches, slit, and were six by twelve inches when placed in the wall, and about eighteen inches above the ground. I laid a floor of three inch oak plank, loose, neither jointed nor nailed, although they were square-edge, and lay close to each other. Five years thereafter, I observed a jostling in a place in the floor, and raised one of the planks to learn the cause, and found one of the six by twelve inch beams rotted off and fallen on the bottom of the cellar. The plank was rotten below, except about an inch sound on the upper side. I lifted the whole floor, found most of the planks rotten, except a shell on the top; and the timbers were rotten, and so decayed, that I took them out and put in oak, after making windows and a door in opposite sides of the wall. I thought the depth of the cellar would have prevented injury to the timber, but I found it the cause of the destruction, as fine shavings and slivers lying on the bottom of the cellar, were perfectly sound, while the timbers were beautifully ornamented with curtains of white mould, hanging in festoons, nearly to the depth of the cellar, as white as snow, very thick, and appeared like bleached muslin.

In the year 1817, I took down an old kitchen on the same lot. The floor had lain on saplings of about 6 by 8 inches, such as are used for scaffold poles. They were bedded in the ground, so that the pine floor came next the ground, and excluded air. They had lain there from 1794, and both the timbers and flooring were very little injured by rot.

I concluded, that a free circulation of air must be allowed, or air must be entirely excluded, to save timber from decay.

It has been found, that when posts are set in the ground and cased with boards for better appearance, the confined air destroys them. Even red cedar, which lasts an age when set open, if cased, which is often done for ornament in gate posts, decays as soon as any other wood, by the confined air.

Destruction of Insects and Vermin.

[FROM THE GARDENER'S GAZETTE.]

It has long been known, that the leaves of the Elder, when put into the subterraneous paths of moles, will drive them away: when the same in a green state are rubbed over fruit trees and flowering shrubs, or when strewed among corn or garden vegetables, insects will not attach to them. An infusion of these leaves in warm water is good for sprinkling over rose-buds and flowers subject to blight; also to prevent the devastation of the caterpillar.

A Pennsylvanian farmer states, in a late American journal, that the water in which potatoes have been boiled, sprinkled over grain or garden plants, completely destroys all insects, in every stage of existence, from the egg to the full grown fly.

Ammoniacal liquor, produced in the manufacture of gas from coal, and to be procured for the trouble of carrying, at any gas work, will eventually destroy the grub and other worms, which so often defeat the hopes of the gardener; more particularly as regards his early crops. So far is this liquid from having the property of injuring even the tenderest plant, that it seems rather to invigorate than otherwise.

A paste of charcoal powder, or soot and train oil, laid on the trunks of trees, in rings or circles, by means of a brush, a few inches from the ground, will form a barrier over which snails or grubs, &c. cannot pass.

Cabbages, &c. may be easily guarded against the depredations of caterpillars, by sowing a belt of hemp seed around the borders of the ground where they are planted; for it is a well known fact, that none of these vermin will approach the place so enclosed.

Destruction by the fly in turnips may be prevented by dividing the seed intended for one day's sowing into two equal parts, and putting one part to steep in a vessel containing soft pond, or ditch water, the night previous to its being used. Next morning mix the whole together, and add to each pound of seed two ounces of flour of sulphur. It has been adopted with success for many years by the intelligent farmers of the south-west of Scotland.

The American farmers effectually prevent the blight or mildew from injuring their orchards, by rubbing tar well into the bark of the apple trees in the spring season: this is done about four or six inches wide round each tree, and at about a foot from the ground. Abundant crops generally follow this treatment.

The gumming of fruit trees is to be prevented by forming a compost of horse-dung, clay sand, and tar. This applied to the trunk and stems of fruit trees, after being properly cleansed, will prevent that spontaneous exudation, called gumming, which is so injurious to their growth.

The growth of weeds around fruit trees recently transplanted, does the latter much injury, and diminishes the fruit both in size and quality. Sonini, in his *Bibliothèque Physico Economique*, states, that to prevent this the German horticulturists and farmers spread on the ground, around the fresh transplanted trees, as far as their roots are supposed to extend, the refuse stalks of flax, after the fibrous parts have been separated. This treatment gives them surprising vigor, as

no weed will grow under flax after the fibrous parts have been thoroughly separated and the earth remains fresh and loose. Old trees treated in the same manner, when languishing in an orchard, will recover and push out vigorous shoots. In place of flax stalks, the leaves which fall from trees in autumn may be substituted; but these must be covered with waste twigs, or other more weighty materials, to prevent the wind from blowing them away.

Mr. Macdonald, of Scalpa, in the Hebrides, having had his corn, &c. considerably injured by mice, and other vermin, put at the bottom, near the centre and at the top of each stack or mow, as it was raised, a handful of the stalks of wild mint, gathered near a brook in a neighboring field: he never afterwards had his grain consumed. He tried the same experiment with his cheese, and other articles kept in his dairy, viz., by laying a few leaves green or dry on the articles to be preserved from their attacks, and with equal success.

To prevent hares, rabbits and rats from barking young trees and plantations, take any quantity of tar, and six or seven times as much grease, stirring and mixing them well together; with this composition brush the young trees, as high as hares, &c. can reach. This will so effectually prevent them from being barked, that if an ash plantation were made in a rabbit warren, the same would remain untouched.

Poison Oak.

[FROM THE PICTOU (N. B.) BEE.]

Middle River, Sept. 16, 1837.

MR. DAWSON,—Sir—I have suffered much in my family, by one of my daughters inadvertently chewing a plant called *Poison Oak*. She felt a prickling in her mouth in a few minutes, and in twenty-four hours her face swelled much. Four days after it had so increased, that she could hardly be known by her acquaintances. The swelling spread over her face; her teeth became loose; her ears ached, and she was not only in great agony, but nearly deprived of her reason. It is nine days since she chewed it, and she now appears to be getting better. Her brother also suffered much, having his face and hands greatly swelled and blistered, by touching the plant.

If, by inserting this in the Bee, you could prevent one individual from suffering, I think it would be worthy of a place.

Sir, yours sincerely,

ROBERT OLIVER.

As the poisonous plant referred to above, grows plentifully in this country, we give the following sketch of its history:

The *Rhus Toxicodendron*, or *Poison Oak*, has the form of a shrub, from one to three feet high, with leaflets angularly indented, and pubescent beneath. But this character of the foliage is probably not constant, and the stunted growth may, in many cases, be owing to peculiarities of situation. It grows in woods, fields, and along fences. It flowers in June and July. When wounded, it emits a milky juice, which becomes black on exposure to air, and leaves upon linen or other cloth, a stain which cannot afterwards be removed by washing

with soap and water, or by alcohol, either hot or cold, but deepens by age. The juice applied to the skin frequently produces inflammation, and the same poisonous property is possessed by a volatile principle, which escapes from the plant itself, and produces in persons who come into its vicinity, an exceedingly troublesome erysipalus affection, particularly of the face, itching, redness, a sense of burning, tumefaction, vascitation, and ultimate disquamation, are some of the attendants of this poisonous weed. The swelling of the face is sometimes so great, as almost entirely to obliterate the features. The effects are experienced soon after the exposure, and usually begin to decline within a week.

A light cooling regimen, with saline purgatives, and the local use of lead water, are the best remedies. Its effects, when applied internally, does not seem to be so great, as many physicians have used it in nervous and other disorders in considerable quantities, with varied success. It grows from the Northern limits of Canada to Georgia.

The juice appears to be well calculated for a permanent ink, or indelible black varnish.

Buckthorn Hedges.

[FROM THE NEW-ENGLAND FARMER.]

SALEM, Nov. 30, 1833.

The Committee on Fruits and Live Hedges:

Gentlemen,—Please consider me an applicant for the premium offered by the Society for the best Buckthorn Hedge, not less than 100 rods, which shall be in the most thriving state in 1833. On measuring mine, I find I have over 118 rods of the Buckthorn Hedge, which I have reason to think would be considered at least equal to any in this country.

The Trustees have generally examined the state of it the present season. Should it be thought proper, I will make a few observations on my experiments in hedging.

I have been for a great many years, fully convinced of the superiority of live hedges for efficacy and economy. I began by setting out my first hedge about thirty years since, of the English hawthorn; the result was far from satisfactory; the plant, being not adapted to our climate, is injured by our summer droughts; frequently experiences blight early in August, and by the first of September, assumes a wintry appearance. My next experiment was with the Three Thorned Acacia; to this hedge I devoted the most careful attention; but the result was equally unsuccessful. The plants ran up without interlacing, and the thorns growing only on the upper branches, the stems below were not thick enough to serve as a fence; it was besides too tender a plant to bear our severe winters. I also tried the crab apple with but little better success. About 1808, there was standing in the garden of the venerable Dr. Holyoke, of this town, which adjoined that of my brother, a large tree of the Buckthorn, or *Rhamnus Catharticus*. In digging the latter, the gardener found several young plants, which had grown from seed shed by this tree. They were given to me, and set out in a nursery; finding they grew very rapidly, I was induced to set them out for a hedge, some time in 1809, and

in this attempt I was entirely successful. The length of this hedge is about 20 rods; has been a good fence over 20 years, and is at the present time in a fine healthy state, not a single plant having failed since it was first set out. It presents a mass of verdure from early spring until late in the autumn, and is completely impervious, affording entire protection to the land it encloses. It being my first experiment with the plant, I did not head it down so low when young as I have since found it advisable to do: the consequence is that it is not so thick at the bottom as any of my others set out since. Finding it so hardy a plant, and so well adapted to hedges in our climate, I have been induced to cultivate it very extensively, and have at different periods, extended my hedges till they measure nearly 120 rods in length.

The method I would recommend in setting a hedge, would be to place the plants in a single row, about nine inches apart, either in the spring or fall of the year; if in the fall, I should clip it the next spring within six inches of the ground, which will cause it to be quite thick from the bottom; and after pruning, can be made to suit the pleasure of the cultivator. I have also tried plashing; it was recommended to me in 1818, or '19, by my gardener, (an Englishman) and I allowed him to try upon a young hedge of crab-apple, but the hedge never flourished afterwards, and I at last pruned away the branches he had interwoven, and lost four years' growth by the experiment. I have never found plashing necessary for the strength and beauty of a Buckhorn hedge, the natural growth of the branches being sufficiently interlaced. Three years' careful management in the way I have described, is sufficient to form a perfect hedge, nearly as thick below as above.

I am, gentlemen, very respectfully, yours, &c.

E. HERSEY DERBY.

We have no doubt but the Buckhorn is not only superior to any other plant or shrub, as material for hedges, in consequence of its possessing the good qualities above mentioned, but its perfect freedom from the annoyance of insects, adds much to its value. The bitterness of the juices of this plant, preserves it from the borer, worms, &c., and it is always cleanly and a beautiful object.

An Expeditious Manner of Producing Trees and Shrubs.

[FROM THE FARMER AND GARDENER.]

This consists in surrounding a branch or limb of a tree with earth, and keeping it sufficiently moist to receive the roots formed on this part of the branch, and girdling the branch by degrees during one season of its growth between this part and the body of the tree, immediately adjoining the part surrounded by the earth.

Suppose a cubical box of three inches square, composed of thin boards nailed together, and a horizontal branch passed through holes in the middle of two opposite sides, and the remainder of the box filled with vegetable mold, (say decayed leaves from the woods) passed into it by an opening in the upper side. If the rain that falls upon the upper side of the box be insufficient to keep the earth within it sufficiently moist, more water may be added (by hand when re-

quired) or a thin board with the edges higher than the middle, may be placed on the box to extend beyond the edges, so as to collect a sufficient quantity of rain water. A small part of the bark is cut through, and in the course of a few days another small portion, and thus continued during the season, until the branch is completely surrounded, and a small ring or circle of bark removed. At a suitable time for transplanting, the branch may be cut entirely off, and treated afterwards as young trees usually are when transplanted; the sides of the box surrounding the earth and roots are removed previously to transplanting. Dry gourds, with holes formed in them while green, answer in the place of boxes.

Peach and other trees, where a *hard strong bark* is desirable, may be produced in this manner to advantage; also *thorns* for *live fences*, where the value of the plants is in proportion to the number of thorns upon it; another advantage arises from the short space of time required to produce an orchard, or shade trees. The branches that would otherwise require to be cut away to preserve the proper form of the parent tree, might be selected to a considerable extent for this purpose. *Sugar Maple* and many other trees, are now in great demand, with which the above method is certainly worth a trial.

P.

*On the Forcing of Early Cucumbers; by JOHN WIGHTON,
Gardener to Lord Stafford, at Cossey Hall.*

[FROM (LOUDON'S) GARDENER'S MAGAZINE.]

One great complaint among the growers of early cucumbers, is, that the plants are often weak and yellow. This is occasioned by the beds being kept too warm, and too much covering being placed over them at night. The heat of the beds causes the plants to grow too fast for the small supply of light which they receive while the days are short; and which are rendered shorter still by the coverings being put on so early in the evenings, and left on so long in the mornings. I have always found that so much covering was rather injurious than beneficial. My practice is to cover up only in very cold weather, and then only with a single mat.

Crown glass should be used for very early forcing, and the surface should not be puttied. The glass in old lights is, like horn, almost impervious to the light.

In mixing up the soil for cucumbers, fresh dung should be used, and it should be allowed to rot in the soil. The common method of employing rotten manure is bad, because in that state the strength of the dung is already exhausted.

The old notion is still prevalent, that it is best to sow old seed, because plants raised from new grow too vigorously. There is no sense in such a prejudice: my own invariable practice is to choose new seed.

The usual method of putting three plants into one pot is also wrong. My plan is to put only one, and one plant only under a light. One good plant will fill the space of a light sooner than three set together.

It often happens that the plants are drawn up, as it is termed; having long stems. This has been attributed to the want of air, and

to the plants being too far from the glass. But it arises, in reality, from there being too much heat in the bed below ; for the plants never grow so, however far removed from the glass, and scantily supplied with air, if there be not too much under-heat.

Cossey, Feb. 10, 1837.

Meadows.

[FROM THE OHIO FARMER.]

The *general management of meadow land*, lies in a narrow compass—little diversified by practice, except when rendered necessary by difference of season and quality of soil. As the early vegetation of grass is promoted by taking the stock soon off the ground, the uplands are usually “hayned,” or laid up at Candlemas; but richer land is often left open until the latter end of March; sometimes, indeed, particularly if the weather be moist, even later; but if continued too long, the hay harvest is proportionally retarded and diminished. On this subject, Mr. Sinclair has stated that a given space of the same quality of grass having been cut towards the end of March, and another space of equal size left uncut until the last week in April, the produce of each being afterwards taken at three different cuttings, that of the space last cut exceeded the former in the proportion of three to two; and in one instance during a dry summer, the last cropped space exceeded that which was cropped (first) as two to one. On land of the latter description, care should be taken to remove the heavy cattle in autumn, for such ground being commonly of a loamy nature, and soon softened by a fall of rain, would otherwise be poached, and it is well known that in wet weather the hoofs of bullocks form holes which hold water, and thus render the herbage sour.

After the hay has been removed, the meadows are generally shut up for some weeks, until the grass again springs, when the stock are turned upon them in such proportion as they appear able to bear during the autumn; though light store stock are sometimes turned in immediately to crop such spots around the margins and in the water furrows, as may have escaped the scythe. Other farmers, however, reserve it during winter, and then use it in the manner already stated in the preceding account of fogging. Some, also, live in the neighborhood of large towns, where they have the advantage of procuring manure, mow the land a second time, sometime in the month of August; but in that case, they should be earlier than usual in the first crop. Cow-keepers, indeed, frequently cut it two or three times in the summer, as they find that rowen hay is of a soft, grassy quality, which occasions a greater flush of milk than that which is first mown, though it does not increase its richness, and they therefore cut the grass long before the seed has time to ripen. This frequent mowing, however, if it does not exhaust the soil, has a tendency to reduce the herbage; an injury to which new meadows are more exposed, than such as are old, and, therefore, land recently laid down to grass should not be mown, but pastured with very light stock, during the two first years, as the surer method of furnishing it with luxuriant herbage.

After the cattle are removed, the land is *bush-harrowed and rolled*. The bush-harrow spreads those small portions of mould which are thrown upon the surface by the earth-worms, and are, so far, an

excellent dressing, when the separation is properly performed. This, however, is most commonly done by interweaving some strong but pliant branches of trees, hedge row thorns, through the open squares of a heavy harrow, which thus forms an efficient brush, and when drawn over the ground, performs its duty perfectly during a short distance; but the branches, being pressed close, and worn by the motion, soon become so flat as not to have the effect of spreading the earth. The best mode is, therefore, to fix the branches upright in a frame placed in the front part of the roller; by which means they can be so placed as to sweep the ground effectually, and when worn, can be moved a little lower down, so as to continue the work with regularity. In this manner the bush-harrow can also be drawn by a single horse, and driven by one man, instead of employing two horses and two drivers, as is the case when the land is rolled and harrowed separately. The object of rolling is merely to lay the land as smooth as possible for the convenience of mowers, for it is thought by many farmers to retard the progress of vegetation; though there can be little doubt, that if the soil be porous and spongy, the roller will add to its firmness, and give a more substantial bottom to the sward. It has, indeed been stated, that the operation of heavy rolling has been found to add six or seven hundred weight of hay per acre on the produce of the crop.

Loss caused by Stripping Corn Fodder.

[FROM THE FARMER'S REGISTER.]

In your number for August, you recommended to the farmers, who had not satisfied themselves of the mischief done by stripping Indian corn of its green leaves, to test it by experiment. This I have heretofore done, and have no doubt upon the subject. I now gather only a few blades, which I find useful as a change of food for my horses. I have, from some observation, formed the opinion, that where corn has an early vigorous growth, in a propitious season, that the injury done by stripping, is not so serious; but retarded in its growth, by a cool summer, or a dry season, I believe that more loss is sustained than would pay the taxes in Maryland. I was from home, from the last of June till the tenth of September, in upper Virginia, and I never before experienced the weather so warm in the mountain region. I learned with surprise, upon my return, there had been a prevalence of easterly winds, and an unusual cool season here. I found, in my neighborhood, stripping the corn in active progress, and by consequence, the shuck and the stalk soon became brown and dry; the tops and blades of mine, which were permitted to stand, retained some verdure, till the occurrence of a sharp frost, on the 14th of this month; they are now dry, but the stalk is still green in a degree, which manifests a continuance of circulation, and I apprehend will contribute to the maturation of the ear. The evidence against my system is, that no one has adopted it. It is hard to part with old habits; when I was young, I knew an aged farmer who recollected the introduction of the wheat fan; and he told me that its progress was slow.

I sow no wheat in my corn fields, and my horses, cattle and sheep, after the corn is gathered, find in them ample provision till January.

Many farmers are deterred from the fallow system, from the apprehension of its cost and expense. I believe if the profit, cost, and labor were accurately estimated, it would be in favor of the fallow. My corn fields receive their full cultivation before harvest, as I find the time which I formerly devoted to gathering fodder, more usefully employed in marling and manuring my fallow. Formerly, in a hot season, when the grass had taken possession of my corn fields, I have been engaged thirty days in sowing wheat. I can now accomplish it in ten, and can select the most favorable time, and the loss sustained by treading down the corn, would, in sowing wheat, form no inconsiderable item in the account of profit and loss.

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Queen Ann's County, Md., 19th Oct. 1837.

On the Culture of the Turnip ; by A. FORSYTH.

The early white Dutch and early Stone are generally preferred ; but the genuine Aberdeen yellow, (golden yellow, or Maltese golden) is the hardest, the hardiest, and most sugary of any sorts I have ever seen. Times of sowing may be about March 25, for early summer crop ; May 15, for autumn supply ; July 1, for a main winter stock ; and August 12, for the latest, or spring crop. In sowing, suppose the ground to be in ridges, 18 inches wide, and some well rotted dung introduced between them ; and, after digging every ridge separately, cover the dung about 2 inches deep, pass the roller over the whole, then make drills, and sow the seeds right over the ridge of dung, burying them not more than half an inch deep. As the plants come up, let them be dusted with powdered lime, to prevent injury from insects ; and when they show their rough leaves, let them be thinned to about 3 or 4 inches apart in the rows, and afterwards thinned for use to 6 or 8 inches. At the approach of drought, frost, or snow, some may be dressed to one inch of the top, leaving the root entire, and crowded side by side in dry tan, sand, or soil, in any open shed, or awning, where they will continue sound and serviceable for a considerable time.

Isleworth, Feb. 18, 1837.

PART III.

MISCELLANEOUS INTELLIGENCE.

A New Grape.—The Buffalo Advertiser says: A new grape has been announced at Rochester, by Mr. L. B. Langworthy. It ripens a fortnight earlier than the Isabella, is devoid of pulp and musk, or fox grape flavor, perfectly hardy, a very prolific bearer, and strikes freely from cuttings.

The clusters are of good size, pretty closely set, the fruit round, and of a dark purple color, not unlike in size and color to the *Munier*. They endure cold well without dropping from the vines; in fact, frost renders them particularly sweet, like the fox grape, of which they are probably a hybrid. Mr. Langworthy calls it the Clinton grape.—*N. Y. paper.*

Valuable Discovery—A preventive of Dry Rot in Timber.—The Farmer's Register contains a communication from Mr. G. M. Totten, Civil Engineer, upon the subject of preserving timber, &c. from dry rot, by the solution of corrosive sublimate. It was first used in England, and the government, after fairly trying the experiment, paid the inventor, Mr. Kugan, £10,000. The timber to be prepared, should be placed in a tank or vessel, and a solution of corrosive sublimate thrown on it, until it is entirely covered with the liquid. The proportion of ingredients recommended by the inventor is—one pound of corrosive sublimate to five gallons of water. Pine planks are saturated in forty-eight hours, and an oak stick, forty feet long and one foot square, requires three weeks. A cubic foot of oak timber absorbs three pints of liquid. Timber prepared by this process was laid in the "rotten pit" of the Woolwich Navy Yard, England, with other pieces unprepared. At the end of three years, both were withdrawn, and the whole of the prepared timber was perfectly sound, while the unprepared was completely rotten. The rotten pit is a place prepared expressly for experiments on timber. This discovery is of great value for ship building, rail roads, &c.—*Boston Adv.*

Tame Ducks are very useful for destroying the black caterpillars, grass-hoppers, slugs and snails, that infest turnip fields, into which they may be very advantageously turned, as they will devour vermin without injuring the crops.

To Farmers.—Corn being frozen severely, before or after it is gathered, if not well dried previous to being frozen, will not vegetate—a circumstance that should be known to every one, in saving their seed corn the present season.—*Worcester Spy.*

American Statuary Marble—We have authority for stating that Mr. Featherstonhaugh, U. S. Geologist, has ascertained the existence of some important deposits of white statuary marble, in the Cherokee country. He has followed an obscure ridge in the mountains six miles, consisting entirely of that valuable substance, hitherto only seen in the United States in thin beds, not exceeding a few inches. He reports one of these deposits as equal to that of Massa-Carrara, in Italy, with which he is familiar. Marble of this kind, has been hitherto brought, at a great expense, from Italy. We trust this additional development of our mineral resources will be highly advantageous to the fine arts, in the hands of our men of genius. Greece and Italy owe much of their celebrity in sculpture to the abundance of statuary marble in those countries. We imagine that if Phidias and Phraxitiles had been obliged to import their material from foreign countries, posterity would never have possessed the noblest examples of art, which their genius has bequeathed to mankind.—*Nat. Intel.*

The Sea invading the Earth.—According to the Railway Magazine, the sea on the side of Prussia has been making slow and steady encroachments on the land. There existed, between seven and eight centuries since, a province named Witlandie, which has been, by little and little, yielding up its soil to the sea, and is now entirely covered with the waters.

Scalding Hogs.—In scalding hogs, it is best to dip them first in cold water, and then in hot—the bristles come out easier.

Stumps.—Stumps are among the most troublesome obstacles in the settlement of a new country. A machine is sometimes used, with lever power, to eradicate them. It is literally a huge "tooth puller." It requires great power and much expense and time to accomplish the business, even with this machine. A better contrivance, because more simple and cheap, we saw practiced the other day. A little excavation was made in under the stump, and some combustible materials enclosed, and then set on fire. Previous to this, however, some dry materials were piled around the root, above the surface of the ground, and then covered over with a compact layer of turf, forming a sort of coal-pit. It has been found, upon experiment, that the stumps will burn in this way, a number of days, with a sort of subterranean fire, and when the turf falls in, nearly every thing of the root is found consumed below and above the surface of the ground. Passing by a field near where the canal enters the Connecticut, a while since, we noticed smoke issuing from twenty little mounds of earth, and, upon inquiry, found they were burning out the stumps in manner above described.—*Northampton Courier.*

Cure for the Wounds of Cattle.—The most aggravated wounds of domestic animals are easily cured with the portion of the yolk of eggs mixed in the spirit of turpentine of Florence.

The part affected must be bathed several times with the mixture each day, when a perfect cure will be effected in forty-eight hours.

Price of Bread.—Few in affluent circumstances are aware how much difference in the health and comfort of the great mass of the people, is occasioned by a few cents in the price of a bushel, or a few shillings advance on a quantum of wheat. Mr. Barton, an English medical gentleman, has been making some enquiries connected with this matter, and the following extract will show the importance of having bread cheap in order to sustain life. Mr. Barton's reports comprise returns from seven manufacturing districts in Europe, distinct from each other.

Years.	Price of wheat per quarter.	Deaths.
1801 - - - - -	118s 2d - - - - -	55,925
1804 - - - - -	60s 1d - - - - -	44,794
1807 - - - - -	73s 7d - - - - -	48,108
1810 - - - - -	106s 2d - - - - -	54,864

There can be no question, but that in order to enjoy good health, the food should be in abundance, and of good quality, requisites rarely to be found where more attention is paid to commerce and manufactures than to agriculture.—*Gen. Farmer.*

The Grain Growing States.—Much is said of the magnitude and importance of the produce of the South, which is estimated at an hundred million of dollars. Let us look a moment at the agricultural products—to say nothing of the manufactures—of the Northern, Western and Middle States. A Buffalo paper says:

"In our article a few days since, upon the subject of the flour, we stated the produce of last year to be, in round numbers, 29 millions of barrels. Assuming 24 millions to be the average annual yield, and supposing that seven-eighths of this quantity are raised in the States not considered as planting States in the whole or in part, and we have 21 millions of barrels, which are to be accredited to the grain-growing States. Put the price at six dollars—a fair average—and we have an amount of \$136,000,000, as the value of a single article of Northern and Western produce."

To make liquid Opodeldoc.—Take two quarts of whiskey or cider brandy, and put in a kettle and warm it, (be careful it does not take fire) put in as much common soft soap as it will dissolve, then bottle it, and add one ounce of gum camphor, one half ounce sal ammonia, two ounces oil origanum, and one half ounce oil wormwood.—*S. P. Rhoades.*

Communicated for the Southern Agriculturist.

Monthly Calendar of Horticulture, &c.

FOR FEBRUARY.

Peas.—Although Squibb advises peas to be sown in this month, yet we confess we have so seldom succeeded, that we would not recommend the practice. Should, however, a successional crop be desired, you must select the earliest varieties, such as the Bishop's Dwarf, Early Frame, Early Charleton, &c. Those peas which are advancing in their growth, should be attended to. They should have the intervals between the rows well and frequently hoed, and at every hoeing have a little earth drawn up to the stems. As soon as they are six inches in height, have them stuck with rods. This ought not to be neglected, for the abundance of the crop depends more upon this being well and *early* done, than is generally supposed.

Irish Potatoes.—This is the proper season for planting a full crop of Irish potatoes. We would advise that they be put in as early in the month as convenient, for as they lie usually a month in the ground before they show themselves, they will not be up before March, when we usually have mild weather. But should they be caught by a frost, yet their tops will only be destroyed, for unless the tubers are formed, the shoots will only be killed to the first joint, from which they will shoot again. Should any of the plants have formed young tubers, they will be killed entirely. The ground should be prepared by deep ploughing or spading, then lay it off in deep trenches, from 3 to 4 feet apart, according to the variety you plant. The best manure is that, taken fresh from the stable. It has been disputed whether it should be placed above or below—from the few experiments we have made, we incline to the former mode. Whichever is preferred, let the manure be what is called "long," that is, well mixed with straw, &c. Do not bury the sets deep, but earth the stems up as they advance in their growth, by which the crop will be increased in the number of the tubers. We are inclined to believe, however, that larger and earlier potatoes will be obtained, if the stems are but little earthed up to. Another method of planting Irish potatoes, is to prepare the ground as above, but instead of planting in trenches, the potatoes are planted flush, and merely covered with earth sufficient to cover the set, say 2 or 3 inches deep. The intervals between the rows are then covered about two feet deep with straw, leaves, pine trash, &c., through which the potatoes shoot. No after culture is required, as the straw, &c. effectually destroys all grass, and what is still better, keeps the soil moist. When the tubers are formed, all that is necessary is to remove some of the straw next to the shoots, and select such as are large enough for use, after which the straw is to be returned, and the young tubers being left uninjured, soon grow to a size sufficient for use. By this plan, there is a continual succession, and none of that waste which necessarily takes place according to the old method of culture.

Beets, Carrots, Salsafy and Parsnips.—The general crops of these vegetables should be sown from the middle to the last of the month. For directions, we refer to our calendar for January.

Spinach.—A successional crop of spinach may now also be sown. The European seed should be procured if possible, but if it cannot be, then only sow a small quantity, and make another sowing in the course of two or three weeks.

Lettuce.—You may still sow lettuce. We would advise that they be sown where they are to remain, for they are apt to run to seed in the spring, *especially those transplanted*; those not transplanted, will remain some time longer before they run.

Radishes.—Should be sown every fortnight—in this way they will succeed each other. They may be sown between other crops, which are of slower growth and which they will not interfere with—as for instance, between the rows intended for corn, tomatoes or okra.

Turnips.—A few of these may be sown, if European seeds can be obtained. We would not advise many, for they soon become hot and stringy.

Cabbages.—These may now be transplanted. If you have any option, by all means select the early kinds, such as Early Emperor, Early York, Sugar Loaf, &c. The late varieties will generally be eaten up by the worms, except the Green Glaze, which is the only variety to be relied on for summer use in this climate. You may also sow seeds of the early varieties.

Corn.—Some of the early varieties of corn should be sown towards the middle or last of the month. The Sugar and Early Six Weeks, are preferred. The flint corn of this State may be sown at the same time, and will succeed the early varieties.

Parsley, Thyme, Sage, and other herbs, may be sown towards the last of this month. The ground should be well manured, made fine, and the seeds merely brushed in.

Artichoke and Asparagus seeds may now be sown, and the earlier the better. In fact, the first ought to be sown in September or October. They will soon germinate, and the young plants will continue to grow during the winter, and grow to a large size during the succeeding summer. The asparagus seeds should be sown early, so that the young plants may have an early start, and get ahead of the grass and weeds. They are very small when they first come up, and therefore easily destroyed by grass. Moreover, it will be exceedingly difficult to keep them clear, unless they have all the advantages which an early start gives them over all weeds and grasses.

General Observation.—We would here observe that our *Calendar* is adapted to the climate of the seaboard, and more especially to the neighborhood of Charleston. It would be impossible to give directions which would answer for all of the places where this work circulates. The only aid we can render distant subscribers, is to indicate the time for doing certain operations, by reference to the vegetable kingdom. Our peach and plum trees bloom from the middle to the last of February; we do not, however, sow or plant any of our tender vegetables, on their first appearance, but usually wait for 10 or 14 days, when, if the weather is mild, we venture to sow a part. The same rule may be followed elsewhere.